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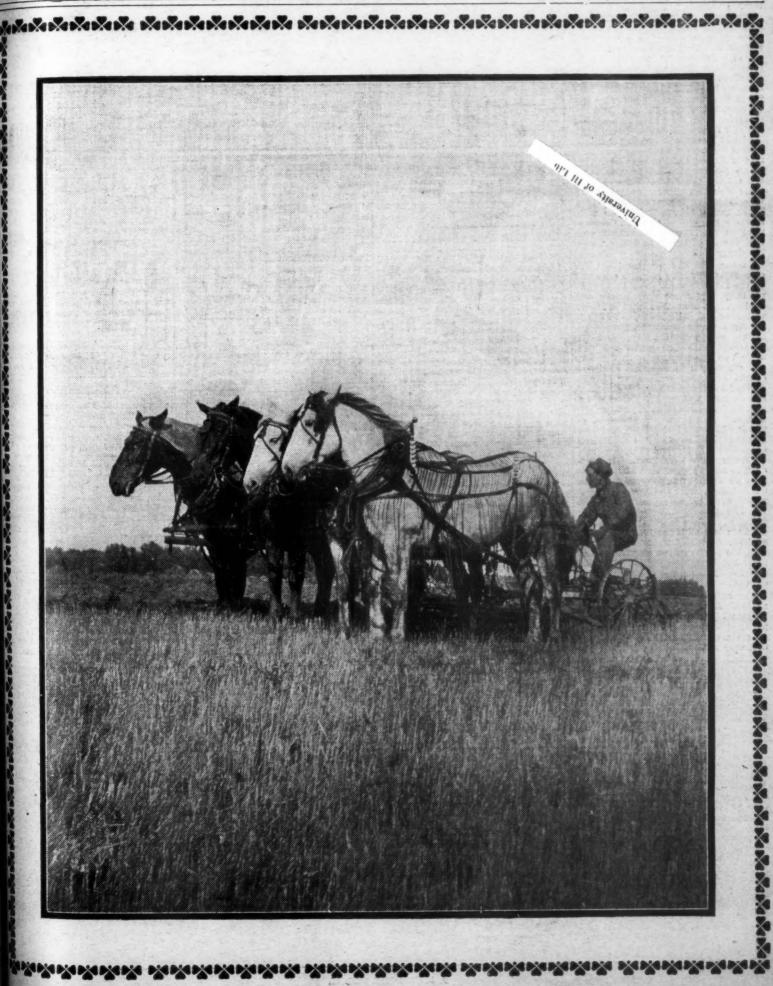
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OLDEST AGRICULTURAL AND LIVE STOCK JOURNAL IN THE MISSISSIPPI VALLEY

Sixty-Seventh Year.

ST. LOUIS, MO., JUNE 25, 1914.

Volume LXVII. No. 26.



XUM

ILOS.

IN THE POULTRY YARD

USING THE INCUBATOR.

We had never thought of the buying of an incubator until last February, when we read an advertisement in one of our farm papers. We all at once became interested and the next day our order for a 60-egg incubator left. We had decided to try a small and inexpensive one, as we did not feel very sure of our success.

On February the 27th our incubator arrived at our town in perfect condi-tion. I brought it home, and the next day we got it ready and filled the lamp with a good grade of oil, and now we were about to engage in a new business in which we had no experience at all, so we read and reread the printed sheet of directions until we had memorized it. Then we lighted the lamp after we had filled the water tank with warm water, and in four hours we had a temperature of 103. We kept it there for 24 hours and then we filled egg tray with 63 fresh hen eggs. We had no trouble in keeping the right temperature. We kept our incubator in our frost-proof storm house, in which the temperature is very even. We refilled the oil and water tank twice each day, morning and night. My wife looked at it every two or three hours, nearly always finding the same temperature, and to our astonishment we kept the temperature within one-half degree of the right temperature, 103 degrees F.

On the 12th day we tested out the eggs and found nine infertile eggs and on the 21st day we took off 53 fine little baby chicks, all very strong and healthy. It was then that we saw where we had made our mistake in not getting a larger incubator, it then being too late to order a larger one. We proceeded with our small one and made two more hatches. In the second set we put in 64 eggs and tested out 11 eggs that were infertile, and hatched 51 strong chicks. In the third set we put in 63 eggs and tested out 22 infertile eggs, and hatched 50 strong chicks. In all we set 187 eggs, of which 32 proved infertile, and we hatched 154 fine, strong and healthy chicks. We felt proud of our success with our little incubator. We managed to set two good hens at the same time we set the incubator, and we put the incubator chicks with the hens and raised over 100 nice young chickens. We like the incubator fine and are delighted with the splendid success we have had with the incubator. We couldn't do without the incubator at all. We have ordered another one of the same make, but instead of 60-egg size I ordered a 120-egg hot-water incubator.

The secret of our success is very simple. After we had completed our hatches I inquired of others as to what per cent they had made with their incubators, and I found in every instance that they had made a much lower per



cent than what we had got, and some had had several years of experience with incubators. However, I found that they kept their incubator in the dwelling house. Two of whom I inquired I got to try a hatch in their storm house, and they had a much better hatch. Now, dear reader, try your incubator in a well-ventilated cellar or in your storm house, and I am sure you will have a much better hatch.

We used only eggs of a uniform size and not over five days old. We obeyed the directions furnished us with the incubator to the point.

In conclusion let me say, the foregoing article is a true report of our success with the incubator, and I believe every one that will heed the advice I have given them in this article, follow the printed directions furnished them with the incubator, and they will have equally as good success as we have had.—Farm and Ranch.

CHINESE EGG PRODUCTION.

United States Vice Consul A. Krisel at Swatow, China, reports to the Bu-

reau of Commerce as follows:

"Swatow has long been a leading port of China for exporting fresh eggs, being in 1912 the fifth port in the amount exported when Swatow shipped 26,716,365 eggs, valued at \$115,063 (United States currency), all to Hong Kong and Singapore. There is no special season for egg production in this district, but after the two rice harvests in June-July and in October-November, when chickens are allowed on the paddy fields, eggs are more abundant and larger. Like most native industries of China, there are no poultrymen in this district who make it their vocation to produce eggs. All eggs are raised by the women folk in small quantities. Dealers of eggs in the interior purchase from house to house, bringing the eggs to the nearest large market town, where they are assembled and carried down to Swatow and sold to exporters. The eggs are not packed as they are in America, but simply placed in bamboo baskets for shipment. The price in the interior is about 5½ cents and in Swatow 7½ cents per dozen. In summer, when exportation is scarcely feasible, the price is lower.

"Duck's eggs are raised on a much greater scale. There are large duck farms where children are employed to care for the ducks. These eggs, however, are not exported, but are used as food in many forms by the people.

"There are no factories in this district where the process of drying, canning or freezing of eggs is carried on."

POULTRY POINTERS.

Three or four dollars may seem like a big price to put into a breeding turkey which is better than your common scrub. But figure up the price per pound and the discrepancy may not be so much after all. The better breeds of poultry not only weigh more than the scrub, but they put the extra meat on in a way that makes them worth more a pound, even for eating. And we all know that a frequent infusion of a new blood is essential to success in the poultry business.

There is the old saying that you cannot raise turkeys and ducks in the same place. This may all be true—of some places. The secret is in the water supply. If the only available drinking water is a pond in which the ducks are perpetually stirring up the mud, beware. But if you depend upon drinking fountains, at least for the turkeys, and keep them in proper condition, the two sets of fowls will get along nicely, each going their own way.

Give the chickens plenty of fresh air, but be careful about the draughts, which are so easily gained and so agreeable during the first warm days. The protecting curtain of cloth will be helpful in several ways, securing the ventilation without attendant troubles.

Did you ever notice how the fowls will rush for a heap of coal ashes, even preferring it to food? This looks as if the supply of grit or charcoal was deficient, and the birds are thus shifting for themselves to supply one of nature's necessities.

It will do them no harm to pick it over as much as they wish, but it will not be a bad idea to renew the grit, charcoal and oyster shell.

Notice how eagerly the fowls all make a rush for the first spears of grass, which recalls the fact that we have heard preached many times, and yet which we are prone to forget, that vegetable matter is an important element in the food. If cabbage and beets are gone, there are still potato and apple parings to help out.—Bessie L Putnam.

UNLOAD SURPLUS HENS DURING HOT WEATHER.

Next in importance to "Death or Captivity to the Rooster," the summertime slogan of the poultryman should be: "To market With the Old Hens." For certainly the non-producers have no place in the scheme of things in an up-to-date poultry plant that is run for profit and not for pleasure alone.

Hens over two years old begin to decline in producing power. They rarely lay as many eggs as in their pullet and yearling stages. Provide that they have been marked with a punch in the days of their your tection of the aged "matrons" will be comparatively easy matter.

a comparatively easy matter.

Before the old hens, the surple young stock and the male birds usent away to market, they should kept in a small pen at least two west to increase their weight. Accordings James G Halpin, College of Agriculture of the University of Wisconsin suitable ration for this period consist of three parts corn meal, one part indicates the control of the university of the provide fatter in the country of the university of the parts corn meal, one part indicates the control of the university of the parts corn meal, one part indicates the parts of the parts corn meal, one part indicates the parts of the p

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EASILY MADE ROOSTS.

A good way to make roosts to chickens is by using two-by-fours in the uprights, and instead of nailing the perches to them, cut a notch he each two-by-four about one inch deep, where the perch should go, and not a small piece of tin across the notch. The perches may then be slipped no the notch under the tin from one pright to another. This makes a streng and durable roost, and the perches may be removed easily.

If a number of good hidden nests an provided about the yard for the takeys they will not as a rule go of the find nests, but will make use of the in the yard. The reason the tarky hens go off so far to make their nest is that they like to find a location where they will be hidden while hying. So when we provide nests in them near the buildings, we should a clude them as much as possible. It barrels or large boxes for the nest then partly cover them with straw a brush. Provide these nests before that they hens get into the habit of goin off, and the hens will find them allay in them regularly if they are a disturbed in any way during the tas they are on the nest.

Probably more losses in the raise of young chicks are caused by impurwater than anything else. You chicks will drink whenever they see water, whether it be in old stagms pools or mud puddles, so one should bear in mind to keep their chicks wis supplied with cool, fresh water at a times. To afford a constant supplied of cool, fresh water for young chicks it is necessary that one should had a suitable device to water them will and one that will keep them out a the water and prevent it from gettle dirty. With a nail punch holes around the open end of a tomato can. The holes should be about one-half ind from the edge of the can. Fill the with water, and holding a saucer of the top, quickly invert. There will ways be a half inch of water in a saucer until the can is empty. If the drinking water is kept in this with the chicks cannot get into it or upsit it as they can when put into an opsidish which is the usual custom.



A HANDSOME FLOCK

CREAM of the DAIRY NEWS

SUNFLOWERS FOR SILAGE.

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sunflowers can be made into silage, providing they are cut at the right seed has practically been made before the leaves turn dry. There period sufficient juice in the stalk to warrant fermentation, and as a result the making of sllage. unflowers do not contain a very large percentage of sugar. For this reason it is better to mix sunflowers with either cane or corn, mixing about half and half, or even twothirds sunflowers and one-third cane. Most of the nutriment is in the upper part of the stalk where leaves and heads are formed. For this reason it is just as well to cut the sun-lowers high. Much of the lower stalk b woody fiber which can just as well be left out of the silage. Such fodder should be cut very fine and well packed so that the air will be ded and fermentation will be lete. Sunflowers are not high complete. in protein and in fact make most exlient silage, not only for stock but for poultry.

By horse beans I understand that

you mean soy beans, which can be you mean soy beans, which can be made into excellent silage. Soy beans or cow peas make a silage which is high in protein and which can be used much as alfalfa or clover hay sused in the ration.
Comparing soy bean silage

corn silage, we have the following: Corn silage, protein, 1.25; carbohydrate, 14.2; fat, .7. Soy bean silage, protein, 2.70; carbo-hydrate, 8.7; fat,

From this it will be seen that soy bean silage is twice as rich in proin as corn silage, and is also about wice as rich in fat. It is little lower carbohydrates; still it is nearer a alanced ration than corn silage. By dring soy beans with sorghum, kafir corn or corn, you can make a better silage from a quality stand-point, and also one that is nearer blanced in food parts.—A. L. Haecker, in Independent Farmer.

THE MILKING MACHINE.

The following is a summary of bul-letin No. 144 of the South Dakota agfeultural college on the milking ma-

Viewed from a mechanical dpoint, the milking machines 1. Viewed used in this experiment caused very little trouble in operating. It is safe to conclude that with reasonable care type of milking machine can be cossfully and profitably operated the average farm having at least

2. Cows giving a large flow of milk vere easily broken to the use of ma-thines. In general, little difficulty was experienced in getting any of the cows accustomed to the milking mathine. The operator, in order to operate most successfully, should study individuality of the cows.

& It is best to strip the cows at to after the teatcups are detached to make sure that no milk remains. If the teatcups are properly attached to the teatcups are properly attached the teatcups are properly attached the teatcups are properly attached the teatcups are properly attached to the teatcups are properly attached to the teatcups are detached to the teatcups are properly attached to the teatcups are the teatcups are properly attached to the teatcup attached to the t the cow is milked by the ma-

No definite statement can be as to the effect of machine mg upon milk and butter fat as the experiments have not ded over a sufficient period of Results of these experiments to that, if the machine and cows Properly handled, the amount of butter fat is not materially

ted by machine milking.

Milk drawn by machine from sediment and other visible rities. It, however, contained bacteria than did the milk by hand into a partially cov-

through cotton filters the bacbrough cotton filters the bac-content of the machine-milked n be greatly reduced. The germ content of machine-

milked milk can also be reduced by soaking the various rubber tubes and teatcups in an antiseptic solution. 5 per cent solution of calcium-chloride, saturated with solium-chloride, proved to be effective in these experiments, and can safely be recom-

FOOD VALUE OF MILK.

G. F. Story, extension instructor in animal husbandry at the Massachu-setts Agricultural College calls attention to three essentials in the production of clean milk that cannot be overlooked if good results are to be expected.

The man. Of all things he is the most important, for unless the dairyman wants to make clean milk, no amount of inspection can insure a uniform grade of milk.

2. The method. Cows and stable should be clean; use pails with a small opening as they keep out 90 per cent of the dirt; again milk per cent of the dirt; again milk through absorbent cotton, (cost 1-3 cent per day; wipe sides and udder of cow with damp cleth before of cow with damp cloth before milk-ing; as soon as strained cool milk to 50 degrees or below and hold until delivery; thoroughly sterilize all milk utensils.

3. The price. Unless the consumer is willing to pay the extra cost of producing high grade milk he should not expect to get it by arbitrary inspection. Many Massachusetts dairy-men would produce a high grade production if they could get a bet-ter price for it than for ordinary

He also, in speaking of the value of milk, says: "Milk is an ideal food for babies and an excellent food for adults. It requires no cooking and can be introduced into almost any diet, at a saving in food cost. One quart of milk has a food value equivalent to three-fourths pound of beef-steak or six eggs. At present prices this gives milk an actual value of from 15 to 20 cents per quart. At 12 cents per quart it is one of the cheapest foods on the market. Peo-People are beginning to buy milk on a quality basis, the same as eggs, meat or clothing. This will be more com-monly practiced when high grade mitk is generally recognized to be one of our cheapest foods.

CURE FOR ABORTION.

The Montana experiment station experts in a bulletin describe the use of carbolic acid as a treatment for con-tagious abortion. The conclusions of the bulletin are as follows: Carbolic acid, either fed in solution

or injected hypodermically, seems to be a specific against contagious abor-

Cows, as a rule, will eat with apparent relish as much as 750 cubic centimeters of a 4 per cent solution of carbolic acid in feed daily.

The hypodermic injection as a treatment in an affected herd involves less labor than feeding.
In cases of impending abortion car-

bolic acid may be injected in suf-ficient quantity to cause staggering gait and dilation of the pupil of the eye, when it should be withheld for from 10 to 15 hours and repeated with no apparent unsatisfactory after

All males used for breeding pur-poses should be treated as indicated. Contagious abortion and granular vaginitis may be transmitted through the medium of the male, unless prop-

er precautions are observed.

Not all cows showing granular

Heifers pregnant for the first time

more liable to abort than during subsequent periods of gestation, and they should be carefully watched and vigorously treated if abortion exists in the herd

WARNED NOT TO HOLD MILK.

Directions for Shipping Milk to Market in Order to Reduce Bacteria.

With the approach of hot weather the United States Department of Agriculture is warning dairymen again not to hold their milk before shipping it to market. A practice prevalent in some places is to take the morning milk, combine it with the afternoon milk of the same day and ship this combination early the following morning. This means that following morning. This means that the morning milk is kept through the heat of the day. When it reaches the consumer, 25 hours or more old, the bacteriological count is high. This explains, the department experts say, why milk from dairies in which all the conditions appear to be excellent is frequently found to be bacteriologically bad.

The remedy recommended by the

The remedy recommended by the department is to hold the afternoon milk, properly cooled, through the cooler hours of the night, and ship it the next morning with the morning milk, also properly cooled, without mixing the two. It is of course essential to this plan that the train schedules be adapted to it, but it is felt that when the importance of the change is fully recognized this difchange is fully recognized this dif-ficulty will be overcome. Such procedure in cooling and handling materially reduce the possibility of sour milk reaching the markets.

Shippers are also urged by the department to see that the milk is thoroughly cooled, as an important step in keeping its bacteriological count low.

CHURNING FARM BUTTER.

Useful hints on churning in the farm dairy are given by the Canadian de-partment of agriculture, as follows:

All the cream should be passed through a finely perforated tin strainer as it is being put into the churn. Churning will be completed in the shortest time when the churn is about one-third full. The churn should nev-er be more than half full. If a small amount of cream is being churned, it is difficult to gather the butter properly and it is apt to be overchurned. When coloring is used, it should be added to the cream just before churning is commenced. Coloring does not improve the quality of the butter, but in the late fall and winter months a little coloring improves its appearance. The butter makers must be guided in using color by the tastes of their customers. Too deep a shade is repulsive.

The proper speed for the churn de-pends upon its size. That speed which gives the greatest concussion will be

the most effective.

If the cream has been properly prepared and is at the right temperature, the churning may be finished without adding any water. If for any reason the butter is coming a little too fast, it is advisable to add, just when the cream is breaking, some water with a little sait in it about two degrees colder than the cream. This will assist in separating the butter from the buttermilk. Two common causes for cream churning too slow are: First, too much cream in the churn; second, the

temperature of the cream is too low.
The time of stopping the churn is an important point, and it has a great deal to do with the quality of the but-ter. The churn should be stopped when the granules are about the size of wheat or split peas. When the butter is churned to too small granules, many of them will go through the strainer into the buttermilk and cause a considerable loss. Over-churning should be avoided as much as underchurning. Over-churning butter will retain a large amount of buttermilk, Valuable Articles FREE



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which will be difficult to remove in washing. The buttermilk should be drawn off as soon as churning is com-pleted. A dipper with a wire gauze can be used for straining the butter-

The butter should be washed as soon as churning is finished, and only pure, clean water should be used. If the butter is for immediate use, rinse the butter by sprinkling two or three dipperfuls of cold water over the butter allowing it to run off at once. Then run in a little less water than there was cream and revolve the churn as in churning until the granules are about the size of large peas and draw the water off immediately.

Armstrong lake, within the Bear tooth national forest, Montana, is said to rival the famed Lake Louise of the Canadian Rockies. It lies at an elevation of 7,000 feet surrounded by towering mountains. A good road which can be traveled in half a day by automobile connects it with the railroad at Billings. A rustic hotel has recently been completed, and many trails make the surrounding region accessible.

Cattle

THE MAKING AND FEEDING OF SILAGE.

Silage during the last three decades has come into general use through-out the United States, especially in those regions where the dairy indus-try has reached its greatest development. Silage is universally recognized as a good and cheap feed for farm stock, and particularly so for cattle and sheep, are the observations made in Farmers' Bulletin 578.

Silage is the best and cheapest form in which a succulent feed can be provided for winter use, continues the bulletin. An acre of grain can be placed in the silo at a cost not exceeding that of shocking, husking, grinding, and shredding. Crops can be put in the silo during weather that can not be used in making hay or curing fodder, which is an important consideration in some localities.

given amount of corn in the form of silage will produce more milk than the same amount when shocked and dried. There is less waste in feeding silage than in feeding fodder. Good silage properly fed is all consumed, and in addition very palatable. Like other succulent feeds it has a beneficial effect upon the digestive organs, and some stock can be kept on a given area of land when it is

the basis of the ration.

On account of the smaller cost for labor, silage can be used for supplementing pastures more economically than can soiling crops, unless only a small amount of supplementary feed is required. Converting the corn crop into silage clears the land soon-er than if the corn crop is shocked and husked, and because of these advantages silage, in the general opinion of dairy farmers, has increased milk production per cow and has in-creased the profits per acre.

Corn.

In all parts of the United States where the silo has come into general use the principal silage crop is corn. One reason for this is that ordinarily corn will produce more food ma-terial to the acre than any other crop which can be grown. It is more easily harvested and put into the silo than any of the hay crops, such as

clover, cowpeas, or alfalfa.
Furthermore, corn makes an excellent quality of silage. The legumes, such as clover and alfalfa, are liable to rot unless special care is taken to pack the silage thoroughly and force the silage thoroughly and force the air out. The only objection which has been raised concerning corn silage is the fact that it contains insufficient protein fully to meet the requirements of animals to which it may be fed. The best variety of corn to plant is that which will mature and yield the largest amount of grain to the acre, since the grain is the most valuable part of the corn plant. The variety commonly raised in any particular locality for grain will also be the most satisfactory to grow for silage.
Cultivation and Yield.

In some sections it is a common practice to plant the corn a little thicker when raised for silage than for grain. Weeds should be kept out, or they will be cut with the corn and may impair the quality of the silage. The amount of silage that can be obtained from an acre of corn will vary from 4 to 20 tons or more. A 50-bushel per acre crop of corn will yield about 8 to 12 tons of silage per acre, depending upon the amount of foliage and stalk that accompanies the ear. Southern varieties of corn as a rule carry a larger proportion of the plant in the form of stalk and leaves than do the northern-grown varieties. Corn should be harvested varieties. Corn should be harvested for the silo at about the same time that it is harvested for fodder.

Sorghums, both saccharine and nonsaccharine, are readily made into silage. On account of their superiority to corn as drought-resisting crops they are more commonly grown in those regions of the West where the rainfall is too light or irregular for a good growth of corn. It is important that the sorghums be harvested at the proper stage of maturity if the best results are to be se-

A mixture of corn and sorghum has proved satisfactory in some localities where the rainfall was so variable as to make the corn crop uncertain.

Clover.

Clover can be used successfully as a silage crop yielding a palatable product high in protein, but it is preferable to make it into hay, or the silage made from clover, as from oth-er legumes, has an objectionable odor, necessitating particular care in feeding to avoid tainting the milk. It does not pack so well as corn, so great care should be exercised in the tramping of the silage at the time of filling, and the depth of the silo should also receive particular atten-tion. Clover should be chopped before siloing as a matter of conveni-ence in feeding and also to secure

ter is considered a little too long, since pieces of this length will neither pack so closely in the silo nor be so completely consumed when fed as will the shorter lengths. On the other hand, the longer the pieces the more rapidly can the corn be run through the cutter.

In case the corn has become too dry or ripe before it is put into the silo, water should be added to supply the deficiency of moisture necessary to make the silage pack properly. Unless it is well packed the silage will "fire-fang" or deteriorate through the growth of mold. Enough water should be added to restore the moisture content of the corn to what it would be if cut at the proper stage. The water may be added by running directly into the silo by means of a more thorough packing, although it horse or by running through the can be placed in the silo without blower. It is claimed that by run-

cow that has inherited from her breeding is not allowed produce according to her inherited qualities. T) cow that is needed present is one that lasts through long period of usefulness, and work efficiently. A large number of the cows are undoubtedly not producing the amount that they are capable of producing, or that their natural in herent qualities would permit them do, if they had a chance.

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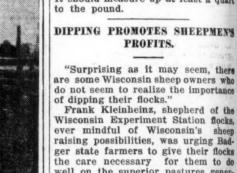
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to the needs of the cows would help to bring some of these cows into different class. The ration that the dairy cow needs is one that will sup ply the different food requirements of the animal; not only what is need for supplying her body, but in addition, a sufficient amount to permit her to do the work required, whether it be in making growth or in producing

milk.

The ration should contain form of succulence, and enough builty grains should be used in the grain retion to make the whole appear bulky. It should measure up at least a quart to the pound.



are some Wisconsin sheep owners who do not seem to realize the importance of dipping their flocks."
Frank Kleinheinz, shepherd of the

PROFITS.

Wisconsin Experiment Station flocks, ever mindful of Wisconsin's sheep raising possibilities, was urging Badger state farmers to give their flocks
the care necessary for them to do well on the superior pastures generally provided for them.

"Sheep which have gone through the winter infested with ticks have certainly suffered day and night from the constant annoyance caused them by these pests," he continued. "Much of the food given the flock went for the support of the ticks.

"After the flock has been sheared, nearly all of the ticks leave the old sheep and crawl onto the lambs where they find more comfortable shelter and younger and fresher blood to suck

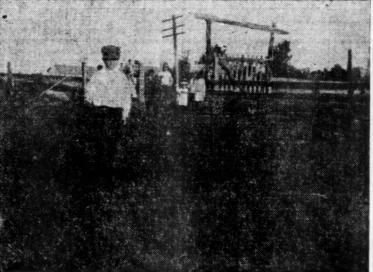
"As the ticks become more numerous the lambs become thinner and the farmers prospective profits soon fade.

Mr. Kleinheinz recommends that both sheep and lambs be dipped as soon as possible after shearing. He has found that it promotes their health, insures better gains, and pre-pares them to go on the market in the pink of condition, ready to command the highest prices.

Any of the good coal tar dips now on the market if properly used are satisfactory tick destroyers.

Mrs. William Grant, an expersion er of a large ranch in California, was recently appointed assistant to Mr. Daniel O. Lively, chief of the department of live stock of the Panama-Pacific International Exposition to be held in San Francisco in 1915.

There are other matters besides the feeding that are necessary for the successful growing of hogs. Close watch should be kept on all animals, old or young, that they do not become infested with lice, which are very detrimental to the growth and thrift of swine. A pig cannot thrive and be covered with lice. During the warm season, a good way to prevent or cure this condition is to have what is known as a cement wallow; that is, a wallow some 12 or 15 feet wide and as long as is necessary to accou date the herd, from five to six inches in depth at one end, to a foot or more at the other, where the pigs can is during the heat of the day. A dip made of any of the coal tar preparations, one part of the crude dip to 50 parts of water, will, if used as above, destroy the lice and prevent further trouble. A few gallons of crude per troleum, poured on top of the dip, are often used; this will not only kill the lice but will also kill the nits. It hogs are lousy, it will be just as necessary to clean and treat the sleeping quarters as it is to dip the hogs, or they will go back to the sleeping quarters and soon become infested again.



STATE BOY CHAMPION.

Wythe Worley, twelve years old, son of Dr. P. C. Worley of Gilliam, and his under six months old sow Poland China pig, who took the state championship in that class in the boys' pig club contest. He belongs to the Caddo boys' pig club, under direction of Professor E. W. Jones, which took a sweep-stake and four championships at the fair, beating all the parishes.

first heads are dead.

Cowpeas, Alfalfa, and Soy Beans.

Cowpeas, alfalfa, and soy beans can be successfully made into silage by exercising the same precautions as with clover. They chould be cut at the same time as for haymaking. However, it is ordinarily preferable, as with clover, to make them into hay rather than silage. The fermenta-tions which take place in silage made of legumes cause a greater loss of nutritive material than with corn silage. Corn husks and pea vines from canning factories, beet pulp, and other by-products are also used in certain localities for filling the silo.

Corn for the silo can be cut either by hand or by machine. Hand cutting is practiced on farms where the amount of corn to be harvested is so small as to make the expense of purchasing a corn harvester too great to justify its use. Hand cutting is slow and laborious, and there are probably few localities now where the purchase of a harvester would not be a profitable investment.

There are on the market several makes of silage cutters that will give satisfaction. The capacity of the machine to be purchased is an import-ant consideration which should not be overlooked. Many persons make the mistake of getting a cutter which is too small, thus making the operation of filling the silo very slow and interfering with the continuous em-ployment of the entire force of men. It is better to get a machine large enough, so that every one will be able to keep busy all the time. The larger cutters are equipped with selffeeders, a labor-saving device which the smaller sizes lack.

The usual length of cutting varies

chopping. Clover should be harvested ning it into the blower the water is when in full bloom and some of the more thoroughly mixed with the cut

MEAT CONSUMPTION PER CAPITA LESS IN AMERICA THAN IN AUSTRALIA AND AR-GENTINA.

The only countries reported as having a greater per capita consumpreported as tion of dressed meat than the United States are the Australian Common-These, it is wealth and Argentina. well known, are countries of sparse population and vast herds and flocks; hence meat is exceedingly cheap and the native consumption large and probably wasteful.

The per capita consumption meat for Australia and Argentina is estimated to be in the neighborhood of 250 pounds per annum; it may possibly be even greater. The cor-responding consumption for the United States was computed by the United States Bureau of Animal Industry to be 172 pounds in 1909, and it is estimated to be about 10 pounds less at the present time. This is much greater than British consumption, the largest in Europe, which is slightly under 120 pounds per inhabitant per annum.

THE COW AND HER YIELD.

Says Professor P. A. There are two factors which influence the production of the dairy cow. First, breeding, and second, feeding. It is essential that she inherit those qualities and characteristics which go to make up production. Having inherited production, it is then necessary that she be fed and handled in such a way that she will produce.

Breeding is of no use at all if the

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Horticulture

GROWING OF COW PEAS.

By E. A. Season.

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One of the best soil renovators and improvers grown in the southern states is the cow pea, and it should be more generally grown by northern farmers, especially in those sections where the clover crop is uncertain. Because it is sensitive to frost it seems particularly adapted to south. where the clover crop is uncertain. Because it is sensitive to frost it seems particularly adapted to southern latitudes, but the earlier bush varieties are grown very successfully as far north as Massachusetts and Wisconsin, while in our own locality (near Lake Erie) we have seen large fields of fine, rank growth, which farnished an abundance of hay or green feed about equal to good hay or alfalfa in value. It is a crop which is especially rich in material which makes good blood, bone and muscle in animals. Hogs greatly relish both the hay and green vines, and an acre of the ripening peas will furnish ample pasture for 15 or 20 young hogs. The pork will be firm and the quality excellent. Cattle and sheep are liable to bloat if they eat heartily of the green vines, but if cut and allowed to wilt no trouble results. wilt no trouble results.

wit no trouble results.

If farmers can grow the clovers successfully it is not necessary to bother about other leguminous crops, but we, like many others, have had poor success with clover upon some of our fields, while cow peas have made a fine showing upon the same. This is distinctly a summer crop and does not have the length of time to obtain the necessary supplies of mindoes not have the length of time to obtain the necessary supplies of minerals as does the clovers, but the entire amount needed for growth and complete development must be close at hand. We do not use farm manures upon such crops; it is a waste of nitrogen, for such plants, if they have an abundance of mineral food, have the power of gathering their own nitrogen.

own nitrogen. We have great faith in good commercial fertilizers, for by their use and the turning under of these leguminous crops we steadily brought up a sadly worndown farm. Now for the clover on a medium soil we apply 300 pounds per acre of a mixture of 200 pounds of acid phosphate, or bone superphosphate, and 100 pounds of muriate of potash; this will furnish 25 pounds of phosphoric acid and 50 pounds of potash. For cow peas, however, we advise the increase of this application one-half.

The bush varieties are best for hay, because they can be more easily mowed and handled. The New Era is the variety we believe the farmers of the North will find best, as the crop majures in a little more than 60 days matures in a little more than 60 days from planting. The planting must not be done until the weather is settled and warm.

After cutting the vines should be left on the ground flat, until they are dried out enough so that if a handful is twisted hard no juice runs out. They should then be hauled in to the barn and allowed to heat and cure without disturbance. Some growers may not agree with us in this, but it has given us and many others a fine,

has given us and many others a fine, green and well-cured hay.

Considering the fertility gained by turning under an average green crop of cow peas, analysis made at a number of experiment stations demonstrate clearly that it adds to the soil more than 110 pounds of nitrogen per acre, which would cost not less than \$14, and also conserves for succeeding crops the 24 pounds of potash previously applied as a fertilizer. Should we cut the vines for hay, the stubble plowed under is a valuable addition to the soil, but, of course, less plant food is conserved and it will be necessary to apply phosphate will be necessary to apply phosphate and potash to the next crop.

ALFALFA ON EVERY FARM.

An acre or more of alfalfa on every farm means 156,000 acres of al-falfa in Minnesota within the next year. It means one hundred and It means one hundred and ix thousand alfalfa centers where this most valuable forage crop may be observed and its great value learned. It means the seeding of more than seventy times as large an acrestrawberries and other small fruits,

age as has been grown with success in Minnesota during the last 50 years. One acre of alfalfa on each farm may seem a small beginning, but the personal experience gained in handling one acre successfully this year will prove very valuable if it is found advisable to increase the acreage next year.—A recent bulletin, entitled Alfalfa-Growing in Minnesota may be Alfalfa-Growing in Minnesota, may be secured free by addressing the writer, A. C. Arny, Assistant Agriculturist, University Farm, St. Paul.

ORCHARD AND GARDEN NOTES.

During the last week of June: Keep the cultivator going. Elms and other shade trees may be pruned.

Strawberries ought to be plentiful. Many of the flowering annuals should be in bloom.

such as raspberries, currants, goose-berries, etc., a plan that will give equally as good results and be eco-nomical of space and labor—is to set them in the same row. That is plant out your strawberries first about 18 inches apart, then go over the same row and stick in the raspberzies or other bush fruits three feet apart. Red raspberries do not begin to suck-er much until the second season or after the best crop of strawberries er much until the second season or after the best crop of strawberries is out of the way and one crop will in no way be deterimental to the other. In fact we have picked some of our finest berries from plants growing in the shade of the raspberries. As the native grasses do not work in as badly on account of the shade, a strawberry bed thus established will remain profitable much longer. Be sure that at least a portion of the strawberries planted are good perfect flowering sorts, A final planting of Golden Bantam ed are good perfect flowering sorts, sweet corn should be made.

a small yellow beetle with b stripes running down its back. with black stripes running down its back. It causes heavy damage not only to cucumbers but to melons and other
vining plants. One part of Paris
green to 50 to 100 parts of air slaked
lime is a very effective remedy. This
should be sifted over the plants in
the morning when they are covered
with dew. For the cabbage worm,
one ounce of white hellebore dissolved in two or three gallons of one ounce of white hellebore dis-solved in two or three gallons of vater is used. This should be sprinkled or sprayed heavily on the cabbage. If some soap is added it will add to the sticking properties of the solution. The hellebore may also be applied in powder form. It is a poison of vegetable origin, and its poisonous properties are lost on ex-posure to the air for two or three days. This makes it necessary to re-peat the application on the plants every few days.

MISSOURI DAY AT FRISCO.

The Secretary of the Missouri State Board of Agriculture suggests a "Mis-souri Day" at the World's Fair in San Francisco, with a program and a showing of Missourians that will overshadow any state day at the 1915 show. He also urges Missourians to co-operate with the Missouri Comissioners to the end that the agricultural exhibits and decorations may outrival and outshinea Il other states. Colonei J. Ed Crumbaugh, America's greatest agri-cultural designer and decorator, will have personal charge of the display.



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SAINT LOUIS



A COUNTRY ROAD.

Rutabagas may be planted. Sow on new land for best results. Currants will be almost ready to plek. They make the best jelly when

about half ripe.

Perennial seed may be sown now and wintered over in a cold frame or protected place.

Set out late celery. Choose a location that is near water as it is often needed early in autumn.

needed early in autumn.

It is a good plan to nip the new shoots of black raspberry when eighteen inches high. This makes a more bushy plant.

As soon as the strawberry crop is off mow the bed and burn or rake the dry foliage. Plow up all but a few young plants in the rows. Cultivate these and another crop may be taken off next year.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul. Minn.

FOR A PERMANENT GARDEN.

Asparagus is one of the best vegetables too often overlooked by the farmer. Coming early and annually as it does with very little further attention after once established, it should be doubly appreciated. Plant a row along the edge of the garden where it will not be disturbed (along with the horse radish and pie plant). with the horse radish and pie plant) with the horse radish and pie plant). If your soil is very heavy plenty of humus or stable manure should be incorporated with the soil the season previous to planting. Asparagus should be planted deep (from four to six inches) and covered gradually as growth is made, setting the plants about a foot apart in the row.

In setting out all kinds of plants be sure that they are set very firmly and not unduly exposed to sun or wind. If the roots are well puddled or mudded they can be handled to

or mudded they can be handled to best advantage and set much firmer than if water is applied in the hole. If for any reason plants or trees must be watered, see that they get enough to thoroughly wet the soil to depth where the roots are and as soon as the surface becomes dry enough, loosen the soil to prevent further evaporation. Few people realize the amount of water that is sometimes necessary to benefit a tree or plant and the indiscriminate use of the sprinkler often does more damage than benefit.

STEAWBERRIES AND BUSH FRUITS.

Cenuine Bluegrass, (Poa Pratensis.) SEEDS CHAS. E. PRUNTY,

MAIN & MARKET,

ment.—Farm Stock and Home.

Simple and effective demedies for two of the most common and de-structive garden pests were recently outlined by Professor L. M. Mont-gomery of the College of Agricul-ture, Ohio State University. Cucum-bor beetles and caphage worms are

ber beetles and cabbage worms are among the worst pests the gardener has to fight. The cucumber beetle is

ES FOR DESTRUCTIVE GARDEN PESTS.

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INDEPENDENCE DAY.

Editor Rural World: The anniversary day of American Independence will soon be here again, and it might be well enough for us to turn our attention to the celebration of the great day of days. My memory dates back to the early 40s, about 70 years ago, when our grandparents made much of their summer clothing from the flax plant they grew, and it would be a curious sight now for us to see a crowd of men and women dressed in homespun linen. The fashions then were much different from what they are now, the women did not wear hats at that time nor for a long time after. In the early 50s the shaker straw bonnet came into fashion in country districts and for ordinary wear they were beautiful with their trimmngs of blue, pink, and other nice colors, they were simply sunbonets, made of some kind of straw, they were not considered ele-gant enough for country belies to wear to church on Sundays. The Fourth of July celbrations in the eaststates where I was raised, were conducted much as they are at the present time. Some times in the ru-ral districts when the nearest town was far away, the country people would select a picturesque locality among the mountains, near a fine spring, amid the embellishments of nature, and there in the shade of those giant old forest trees, they would hold a grand barbecue, and roast an ox or cow, and feed the multitude. At such picnics, long tables would be loaded down with fruits prepared in different ways, and vegetables, pies and cakes with other dainties were on hand, and everyone enjoyed this old-fashioned sociability.

At that time there were still quite a number of old veterans living who had fought at Lexington, Bunker Hill, Trenton and Yorktown, but I was too young then to remember of seeing such old men at such festivals. My such old men at such testing and father was a very old man in 1844, and I remember of often seeing and talking to him in his old days. I and talking to him in his old days. I never knew how old he was, but he must have been born during revolutionary days, or even before that strug-gle commenced. I remember of hearing of the death of old revolutionary soldiers while the Mexican war was raging in 1846. It is likely that many men who were mere boys in revolutionary days, attended these Fourth of July celebrations I speak of.

Soon after the commencement of the civil war, I went with a party of old and young people on an excursion to city of Philadelphia, and while there we went to the old Independence Hall, where an attendant constantly stayed and looked after the old relics that were kept there. I do not remember much about those old relics, but I do remember of seeing the old arm chair that Washington used when he was President, and I also remember of seeing the old Independence bell that proclaimed liberty throughout the land, on that memorable Fourth of July, 1776. The lower part of the bell had a crack in it about a foot long, and was laid by as a relic unfit for use. Among other relics we saw some of the blood-stained clothing worn by the dashing young lieutenant, Elmer E. Ellsworth, when he was killed while capturing the Confederate flag that floated from the roof of a hotel in the town of Alexandria, near the city of Washington. After we had seen all the sights in the room of relics were permitted to ascend the winding stairs to the top of the old structure, where we had a fine view of the city Chestnut street was lined with fine old shade trees, but it appeared a lonesome thoroughfare in comparison with Broadway, New York. I have heard the story long ago, that Benjamin Franklin when he first came to Philadelphia, strolled up Chestnut street nunk pread in nis nands and as he walked along with an awk-ward gait, munching his bread, a bright looking and nearly grown damsel espied him, and as he was a green, awkward country boy, he appeared so ridiculous that the girl burst out in laughter, but he kept on his way and finished his frugal meal, and in the course of time, as he became famous among his countrymen, he married this same girl.

hero of the war for Independence was buried near the little hamlet of Stinson, some 10 miles from where I live. This man's name was Lumley, and he was with Washington's army on the night that the troops crossed the Deleware, amid the floating ice, just before the battle of Trenton, when the Hessian hosts were made prisoners. This was considered the darkest hour of the revolution, among the patriotic men of those times, and this victory greatly revived the colonists. In 1835 Lumley came to Stinson and built a grist mill on Turnback river, where he ground grain for the old pioneers un-til the early 40s, when he died. The remains of the old mill can yet be seen, and the grave of the old hero is not far away, where the two millstones he used so long, now mark the grave. There is probably no other soldier of revolutionary fame that is buried in Missouri. I am told by old residents here that Lumley was very patriotic, and that at the Fourth of July celebrations he delivered some fine orations. On such days the old settlers roasted a cow or ox and had a grand barbecue, and to this day it is said that the ashes in the pits where the animals were cooked can stall be seen

J. M. MILLER.

BANKERS WILL MEET WITH BUSINESS MEN

Betterment of Farmer to Be Discussed at Conference in St. Louis—to Organize Counties.

To enlist one banker and one merchant in every county seat of Missouri in an organization to better relations between the farmer and the business man, is the purpose of the conference to be held Tuesday in the Planters' Hotel between committees of the Missouri Bankers' Association and the Missouri Federation of Commercial

"The counties would be organized under a group system, similar to that of the Missouri Bankers' Association," said Richard S. Hawes, president of the association. "At the head of each group will be a chairman in charge of various county committeemen. From this county and group system will be organized a general committee, which will supervise the entire state work, being the headquarters from which will emanate instructions and various other necessary things in a movement of so great magnitude

In a recent article on the leadership of bankers' associations in the development of agriculture and good roads, appeared this clause, which was the insipration for the present conference: He who makes two blades of

grass grow where one grew be-fore, in fact, produces 2 pounds of freight to ship, two checks to deposit, two bolts of goods to buy, two plows to sell, and more important than all, \$2 for jeans which before had barely one.

"This clause conveys to one more than any speech the purpose of the conference.

Officials to Be Present. The Missouri Bankers' Association will be represented by the president, Vice President Gordon and Secretary Keyser, with the following members of the Agricultural and Good Roads Committee: W. W. Head, chairman, of St. Joseph; W. S. Wells, Platte City; W. B. Sanford, Springfield; M. B. Clarke, West Plains, and F. C. Millspaugh of Canton.

The Crop Movement Committee, an organization composed of the various exchanges of the United States, which has in mind an active propoganda with a view of encouraging agricultural development, will be represented by Messrs. Messmore and Maffitt.

The Federation of Commercial Clubs, well, I berly, and

A. N. Lindsay of Clinton, Mo.

It also is hoped that a Missouri State Agricultural College expert will be present, and the industrial departments of the various railroads will probably be invited to attend the conference after the plans are completed.

A farmers' bulletin on alfalfa is being prepared by W. L. Nelson of the office of the State Board of Agricul-I have lately & arned that an old ture. It will be the summary of the

ripest thought and latest experiences of hundreds of successful growers of alfalfa in all parts of Missouri.

Weekly Market Keport

Cattle Firm; Hogs Up—Supply of Cat-tle Small and Demand Light. Hogs in Liberal Inquiry.

CATTLE—Native cattle were light, but about up to the usual Monday volume. Contrary to what is generally the case, while the total supply of beef steers was very light, the quality was good. Three loads of prime yearling beeves were offered and they changed hands early. mand was good for a Monday market and the steers changed hands early in a steady market. Two loads at \$9 topped for the day and another bunch brought \$8.85. Four head of 1300-pound beeves sold at \$9.40.

Scant offering of she stuff and confined largely to odds and ends and a few loads of medium grade stuff. While demand was not heavy it was of sufficient volume to take care the small run and the cows and heifers changed hands fairly early in a steady market. Few yealers were offered and quality was lacking. Prices reflected practically no change. There were only a few stockers and feeders

and market was unchanged.

The quarantine supply consisted of
14 cars, most of which came from
Texas. However, there were a few loads from southeastern territory, although the offering from this section ran under half a dozen cars. There was a good demand for Texas steers, and they got action soon after arrival. Market was on a good, steady basis and there was an early clearance. No change was evident in the trade in canners. Supply was very light and while the demand was not broad, as is generally the case on Monday, yet the inquiry was amply broad to take care of the light showing. Prices were

on a good steady basis throughout. HOGS—A fair supply, and as there was a good demand the market was active, with prices on a higher basis. Taken as a whole prices were 5c higher than on Thursday and the highest of the week. The top was 7 ½c higher than any previous day this week. It was a good lively trade the entire day, or, rather, so long as any hogs re-mained for sale, and the close was firm with a good clearance.

Four loads of medium-weight hogs ranging from 183 to 217 pounds sold at \$8.47½, which was the top of the local market, the top of all of the principal western markets for both yesterday and the week, while the bulk of the hogs went at \$8.30@8.40. The top was a full nickel above the top in Chicago and there was a lot of leads that brought more than the of loads that brought more than the best price in Chicago.

The hogs at the top of the market all went to the city butchers, while shippers paid \$8.42½ and \$8.45 for most of their purchases, but they secured some of them at \$8.40, while packers paid \$8.20@8.40 for the hogs they bought. Rough packers went mainly at \$7.85@8.00, and there was good many roughs taken out and All stags are sold by themselves. selling the same now as rough sows.

Lights and pigs that had plenty of quality found a right good market,

but the poorer grades did not po well and southern hogs of all were poor sellers. lights found sale at \$8.15@8.35 offerings went at \$7.75@8.10, best of pigs brought \$7.85@8.15, fair medium grades went at \$7.25@1 and others on the poor order at 10

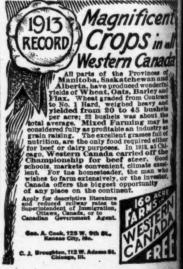
SHEEP-There was change to the sheep trade. All fat sheep and lambs found read at steady to strong prices and at le twice the number offered were ned to meet the demand for the be grades. It was about the best man of the week and the highest in the weeks or more on the good kinds, the poorer grades are not selling a better than at the opening week.

A double deck of lambs from Ten essee, 280 head, brought \$3.55, and a load from Carlisle county, Ky., we at the same price, which was the to of the market, and as high as a of the market, and as high as lambs sold here this week. Lamb from Missouri and Illinois sold and high as \$9.50. Most of the good lamb high as \$9.50. And better while a mediant brought \$9.25 and better, while a ium class went at \$8.50@9.00, some poor grades at \$8, or but litt better.

Good, handy-weight sheep went in the slaughterers at \$5, medium kind of muttons sold at \$4.50@4.75, and the heavy plain ewes at \$4@4.25. pers and good stockers sold at \$3.350 4.00, fair stockers at \$2.50@3.25 and bucks at \$3.50. Bucks sold at \$3.50 and breeding ewes at \$5@5.25.
HORSES—The trade in native an

mals was on a fairly good order this week, and no complaints were registered as to the selling of eastern types, but the southern animals were slow sellers, which is customary for this period of the year. The good work animals that were capable of being put right into service found a good stiff demand from the easter buyers, and these were the animal that found the strongest outlets all

MULES-The only kinds that would do any good, whatever, on the markethis week were the good quality types of miners and big mules, and shipper should get them cheap in the country, as they understand that values are not as high this season of the year as other periods.



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ar subscriber, who has read it for many years, of the TWICE-A-WEEK lasue of the

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Dr. E. W

The Pig Pen

FEED FOR WEANED PIGS.

The time to wean the spring pigs de-The time to wean the spring pigs de-pends on whether or not the sow is to be bred for a fall litter. Where pigs are farrowed after the middle of March it is almost necessary to wean hem at the age of eight or nine weeks ithe sows are to raise a fall litter. The all litter should come as early as posgible in order to have a good start before cold weather sets in. Early fall pigs are always more easily cared for and respond to feed more readily than the late pigs. Where the sow is not to be bred for a fall litter, and feed is not an item of consideration, and the sow is in good condition, the pigs may be allowed to run with the ow to good advantage until twelve weeks old, or until the sow weans them, says Independent Farmer.

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Pigs will begin to eat at three or four weeks old and should have a separate pen to eat in. Encourage the pigs to eat as much as possible so they will not depend so much on the sow, and will also be in better shape to wean.

Where the pigs are to be weaned when eight or ten weeks old, the sow when eight or ten weeks old, the sow thould be shut away from them at alght for a few days before they are taken away entirely. The sow will be-gin to dry up if the pigs are kept away at night and there will not be any danger of her having trouble with her udder as there would be otherwise, especially if she is a heavy suckler.

As soon as the pigs are weaned and

eating good, they should be treated for worms, as they are sure to have them, and they must be gotten rid of if the pigs are to get the right kind of a start. Also they are more easily gottart. Also they are more easily gotten rid of at this age than any other time. One of the best remedies for worms I ever tried is that used by Henry Dorr. Shut pigs up for twelve or twenty-four hours so that they will be hungry. Take one ounce of santonin, one gallon of oil meal and mough shorts to make twelve or fifenough shorts to make twelve or fif-teen gallons of slop. This is enough for two feeds for one hundred pigs. Keep pigs away till you have all slop in trough so all will have an even chance. By following these directions you will get good results. Do not feed mantonin or any other worm medicine on a full stomach as it is money

Where pigs are to be crowded while young they should be fed at least three times a day and five is better. Feed only what they will eat up clean without gorging themselves. Overfeeding is the surest way of getting a pig ut of condition.

One of the best feeds for pigs, as everyone knows, is milk. However, a good feed can be made by the use of mill feed, tankage, oil meal and ear corn. Where the shorts are of good quality I feed 300 pounds of shorts, 100 Dounds of bran, 25 pounds of oil meal and 25 pounds of tankage. If pigs have alfalfa to run on at will, the tankage may be omitted unless you wish to crowd them as fast as possible. The mount of corn to feed can only be ald by the condition of the pigs. Do not feed any more corn than is re-quired to keep the pigs in a good growcondition and not fat. Some pigs ill stand twice as much corn as others and the only way to tell is to use good judgment and not feed more than the pig will digest, for if you do it is orse than wasted. Yours for the best big hog that will

we the most gain for feed consumed.

NOT A CHOLERA CURE.

Agriculture Says Benetol Is of No Value in Treating Hog Cholera

In view of the fact that certain ms for a proprietary remedy—benhave been made in the public se recently, calling attention to it an alleged preventive and curative edy for hog cholera, in such a ther as to indicate that the Minnea Experiment Station approves it, wish to call the attention of hog to the following facts: Dr. E. W. Berg, whose name is men-

tioned in the press articles, is not and never has been connected with the Minnesota Exerpiment Station either directly or indirectly.

In one series of experiments the hogs that were given benetol died before others which had not been given any treatment at all, and the characteristic lesions of hog cholera were found, on autopsy.

In a large number of cases it was found that the hogs that were given benefol, by drench, as directed, de-veloped a severe inflammation of the entire digestive tract, evidently due to the irritating action of the drug.

When benetol was injected hypo-dermically, local abscesses usually followed at the points of injection.

In a herd of hogs sick or cholera by natural infection, and treated with benetol by a representative of the company manufacturing the remedy, every hog treated with benetol subsequently died of cholera, while a few that were untreated made a recovery. The treatment of this herd was under observation by a veterinarian from the Experiment Station.

Neither the Minesota Experiment Station, the State Live Stock Sanitary Board, nor the Federal Department of Agraculture, has given any endorsement of benetol as a remedy to combat cholera, as might be in-

the flock should be moved to fresh ground every 10 days or two weeks to prevent infection of lambs by larvae from eggs dropped from the ewes. I lambs are by themselves the time be tween changes might be longer, but in most forage crop rotations changes will need to be made every two or three weeks. Fall-sown rye, spring oats and vetches or peas, rape, cow-peas, soy beans, crimson or Japan clover planted at proper intervals, will furnish fresh pasturage at times desired. Some of the land can be used twice in a year, as by having one planting of rape upon the rye ground. The cultivation of the land destroys all infection from previous pasturing. Under such a system of cropping and grazing the land will improve, as the manurial value of the crops is practically all left upon the land and is very evenly distributed.

STOMACH WORMS IN SHEEP.

Sheep suffer little from tuberculosis and other infective diseases, but they often become infested with certain blood-sucking parasites or worms which have become rather a serious obstacle to those who are interested in raising sheep. The most dreaded of these is the stormed worm. of these is the stomach worm. worm is widely distributed and

TWO PLAYMATES

ferred by the newspaper articles referred to.—A. F. Woods, Dean and Director, Department of Agriculture, University Farm, St. Paul.

The Shepherd

In experiments carried on at the Indiana Experiment Station with fat-tening lambs from the western range, it was found that the most profitable rations were those in which shelled corn, clover hay and corn silage were fed. When no silage was fed the rate of gain was satisfactory, but the cost of the gain was higher than when si-lage was added to the other feeds. Silage as the only roughage produced a more economical gain, but not as rapid a gain as when clover hay was also fed. The finish of the lambs fed on silage alone was not so good as that when both roughages were in-cluded in the ration. Oats were found to be too expensive to be used as a partial substitute for corn. Cottonseed meal increased the rate of gain, but did not in all cases add to the finish of the lambs, while it always added to the cost of the gains. Lambs kept in a barn made as rapid and economical gains as those in an ing period the old sheep should all open shed, but did not finish or sell as well.

Keeping the sheep upon crops sown upon plowed land prevents parasitic infection. Such practice also furnishes the greatest amount of feed from each acre and the kind and variety of food upon which sheep thrive best. Plowing the land prevents danger from stomach worm eggs dropped upon it. In warm weather

certain stages of its life it is very resistant to cold or dry weather. The stomach worm reaches maturity and lays eggs only in the stomach. The eggs pass out with the intestinal contents and begin hatching within a few days after they are dropped, if climatic conditions are favorable. Dry weather or severe cold will destroy the eggs and prevent them from hatching.

After hatching, the young worm crawls upon a blade of grass while it is wet with dew or rain. The worm then encloses itself in a membranous sac, and remains attached to the grass. In this condition it can remain uninjured by cold or drought much longer. If the grass is eaten the encysted worm reaches the stomach of the browsing sheep, where it soon matures. It injures the sheep by robbing it of certain foodstuffs, by sucking blood, by giving off certain poisons that injure the red blood cells, and by the irritation caused it clings to the stomach wall by the aid of sharp teeth. Lambs are more susceptible than older sheep probab-ly because of the fact that the older sheep have become accustomed to the presence of the worms.

Prevention. In the spring soon after the lamb-

receive a one or two ounce dose of gasoline, followed by a small dose of epsom salts. They should then be turned on a worm-free pasture, if possible. In July the entire herd, including the lambs, should be treated with gasoline and turned into a new pasture. This treatment should be repeated in November, when the flock should again be removed to new pas-tures. Pasture rotation combined tures. Pasture rotation combined school house and improve every coun-with drugs that are injurious to the try church building!





FruitBook FREE

worms is the most practical method of successfully combating this worm. At University Farm pasture rotation has been practiced so successfully that few losses have occurred from the effects of this worm.—W. L. Boyd Assistant Veterinarian, Farm, St. Paul. University

DIPPING AND HEALTH.

Dipping is essential to good sheep flock management. No farmer should attempt to grow sheep without planattempt to grow sneep without planning to dip them at least annually and in most cases twice a year, according to the advice of Professor H. E. Allen, of the Indiana Agricultural College. When sheep are brought to the farm from other flocks, and expecially when transported and especially when transported there by railroads, they should be thoroughly dipped before they are allowed to mingle with the rest of the

Experience has taught sheepmen that sheep thrive much better when their skins are clean, and it has been demonstrated that a good dip increases the quantity and improves the quality of the wool. It is impossible for lambs infested with ticks or other parasites to thrive properly, owing to the constant irritation set

up.
In trying to get relief lambs often nible at the fleece and swallow por-tions of wool with fatal results. A good and regular system of dipping the entire flock means money well expended. Hence most of the leading flockmasters dip twice in the year, once in the spring and again in the

The object of dipping is to destroy the parasites in the fleece, such as scab mites and sheep ticks and lice, and to prevent subsequent attacks from the same. In England, where the sheep growing has attained its highest state of perfection, dipping is required by law at least twice a year.

While dipping may not be done at any season, it should, if possible, be avoided in cold weather for obvious reasons. The most favorable time for the spring dipping is a few days after shearing time. By this time the ticks have largely passed from the ewes to the lambs.

At this time comparatively little material is needed. If the flock is badly infested, it is important to repeat the operation in ten days in order to destroy the insects that have hatched during the interval. The flock should again be treated in the fall, so as to go into winter free from parasites.

FARM CLEAN-UP SPIRIT WINNING.

The first "Farm Clean-up Day" suggestion came from Missouri—of course that is the place from which so many of the good things of America have sprung. The "Farm Clean-up Day" movement this year won the approval of Governor Major, the Federation of Women's Clubs, the Farmers' Clubs and Community Clubs, and many thousands of thoughtful farmers. Next year, let us hope, it will become a working holiday throughout rural Missouri and that its efforts may brighten every home, clean up every

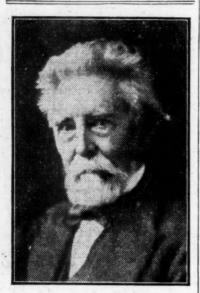
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Norman J. Colman, First U. S. Secretary of Agriculture

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A picturesque even in connection with the live stock department of the Panama-Pacific International Exposition will be the old-fashioned sheep dog trials, which will be accompanied by sheep shearing and wool sorting contests in which men and women from every sheep raising country of importance will compete.

The New York State Commission on Prison Reform will continue its investigations another year and "as the investigations for some years carried on by the National Committee on Prison Labor are placed at the disposal of the commission" its final report will be based on the best thought along penal and co-ordinate lines. It is hoped as a result of the commission's work to develop in the state of New York a prison system which will lead towards the upbuilding of the prisoner and help to fit him to reenter society as a useful member thereof.

"Usefulness is greatness; there is hone other," declared the Rev. Charles Reynolds Brown, dean of the divinity school of Yale University, in the baccalaureate sermon Sunday to the graduating class of the Kansas State Agricultural College. "The True Definition of a Man," was the subject of Doctor Brown's address. He presented various definitions held in the past or the present, including the conceptions of man as a victim,

as a fighter, as a producer of material wealth, and as a thinker. Each of these he discarded as erroneous or incomplete, then presented service as the measure of true manhood or womanhood.

animals themselves. In the portation of such stock, it is from responsibility for such as occur in consequence of tality of the freight, in the of negligence. The transports

Child-labor is virtually banished from Australia and New Zealand. The work in these countries is done by adults and not by the soft hands of tiny children. The table of wage statistics shows how steadily wages have arisen from 1901 to 1911. Women vote in Australia and New Zealand. Strikes are unknown and sweated labor is not tolerated.

THE SEVENTEEN-YEAR LOCUST.

The seventeen-year locust, or more properly cicadia, is making its periodical appearance in certain parts of Ohio this year. There is no practical method for its control except in limited areas. The locust does very little feeding, the injury coming when the female makes cuts in the twigs of trees and shrugs in which she lays her eggs. The twigs above the points of attack usually die. If not too numerous, small trees and plants may be covered with mosquito netting which affords protection against this insect. All twigs in which eggs have been laid should be pruned off and burned during July in order to destroy the resulting larvae.

EXPERIENCE PROVES THAT SPRAYING PAYS.

Actual results illustrating the benefits of spraying fruit trees are shown in the orchard of E. R. Clark, of Preble county, Ohio. A year ago the foliage and fruit in his young orchard was entirely destroyed by leaf curl. This was the direct cause of Mr. Clark's decision to spray for this disease. Two dormant sprays were made during last November and December and the orchard was gone over again this spring. As a result every peach tree is in full foliage and there is prospect for a bumper crop of fruit. The contrast is further brought out by the fact that two trees, located 40 feet from the main orchard, which were overlocked and not sprayed, have lost both fruit and foliage again. The entire orchard was also at one time badly infested with San Jose scale. Starting last years Mr. Clark sprayed well for this. Samples taken a few days ago from formerly infested trees were pronounced entirely free from scale by an expert from the Ohio Experiment Station.

URGES YOUNG MEN TO RETURN TO FARM.

"You have a greater duty when you return to the home farm than simply to raise big crops of corn and alfalfa," said C. M. Freeman, secretary of the National Grange, in speaking to the young men who finished the two-year course in agriculture at Ohio State University in June. "You must be ideal farmers, which means that you will be leaders in your communities in the things that make for attractive country life," continued Mr. Freeman. "Your responsibilities are now greater than they would have been if you had not had the opportunity to attend the university." The speaker urged the 30 boys who received certificates to return to the farm and work for themselves rather than go into professional or government work. "There is and always will be great need for educated young men on the farm." The speaker concluded by saying that the problem of the farmer now was not so much to try to produce 100 bushels of corn or 50 bushels of wheat to the acre, but to work toward getting proper compensation for the crops he already raises.

TRANSPORTATION OF LIVE STOCK

The carrier who undertakes the carriage of living animals, writes De Witt C. Moore in the April Case and Comment, The Lawyer's Magazine, is not answerable for damage caused by the conduct or propensities of the

transportation of such stock, it is relieved from responsibility for such injuries in consequence of the vias occur tality of the freight, in the absence of negligence. The transportation of cattle, horses, or other domestic animals is not subject to precisely the same rules as that of packages and inanimate chattels. Living animals have excitabilities and volitions of their own, which greatly increases the risks and difficulties of management. ment. They are carried in a mode entirely opposed to their instincts and habits; they may be made uncon-trollable by fright, or die from fright or from starvation because they refuse to eat, or they may die from heat or cold; they may injure or destroy themselves or each other. The carrier of live stock is not an insurer of animals against injuries arising from or attributable to the natural or proper vices, or the inherent nature, propensities, and habits of the animals themselves, and which could not be prevented by foresight, vigilance, and care. In other the common-law responsibilities of the carrier attach.

THEATER HEADACHES.

The most frequent cause of head-aches occurring during or after the theater is eye strain. People who use the full energy of the delicate eye muscles to obtain perfect vision, are often unconscious of this strain. In the theater, the continuous effort to keep everything constantly focused exhausts the nerve centers and headache results. The practice of seating the audience in total darkness while they are staring into an in-tensely lighted stage is another serious factor. The pupils being widely dilated in the dark, admit the excess of light from the stage, often producing irritation of the eyes which lasts sometimes for days. Those subject to headaches should never sit where it is necessary to reies the where it is necessary to raise the eyes to watch the stage. This unnatural position of the eyes is very tiresome even to those who never have trouble at other times. Unfortunately the theater-going public has not insisted on proper ventilation without drafts. The overheated foul air of itself lessens the spectator's vitality and power of endurance. followed by drafts frequently pro-duces stuffing up of the nose, or cold in the head and a disagreeable head-ache from internasal pressure, which is usually worse the following morn-

THE MENACE OF THE FEEBLE-MINDED.

The economical and social problems connected with the feeble-mind-ed are of far greater importance than the average "man on the street" realizes. Whatever the cause, the fact is that this class is increasing enormously in all civilized countries. Some figures in a report of the Committee of Visitors of the State Charities of New York are commented on in the Journal of the American Medical Association. According to this report, there are in New York, at present, 32,000 feeble-minded persons. Of these, 4,900 are provided for in institutions of the second tutions especially designed for their care, and 4,500 in other institutions, leaving at large 22,600. It has been estimated that of the 32,000 feebleminded, 10,000 are girls and women of child-bearing age, 1,750 of whom are cared for in institutions designed for the care of such persons, and 1,625 are confined in reformatories, prisons and almshouses, leaving about 7,000 at large in the community. prisons Goddard estimates that, in the way of spreading disease and immorality and increasing the stock of feeble-minded. a girl or woman of this class, of childbearing age, is three times as great a menace to the community as a feeble-minded boy or man. The Royal Commission of England reports that in that country the feeble-minded are increasing at twice the rate of the general population. The importance of providing, by the establishment of additional institutions and the completion of those under way, for the custodial care or control of a greater

Amos W. Butler of Indiana to the fect that feeble-mindedness proton more pauperism, degeneracy crime than any other force, that touches every form of charitable tivity, that it is felt in every not the state and affects in some mall the people, and that its contact and the people, and that its contact and the people and the people and that its contact and the people and the peop

PUBLIC EDUCATION BY UNIVERS.

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changing conditions in education ideas may be found in the ground in the ideas may be found in the grown appreciation on the part of leads universities of their responsibility the public. In former generations university was regarded as a thin apart, and a college professor was a college or not appreciate or not only by the house looked on, not only by the humor paragraphers of the newspapers, also by the mass of people, as a pliving in a world of ideas, with any connection with practical affair Today our leading universities a recognizing not only the opportunity but also the duty of making their knowledge for the benefit of masses. This tendency is highly of mendable, especially in the field public health and prevention of ease. The Harvard Medical S has a standing committee on p lectures which arranges each year a course of Sunday afternoon to by members of the faculty. The talks are open to the general put and are on topics of general inter For instance, last year the course 20 lectures included such topics a "Preventive Medicine in Relation a Industrial and International Concord," "The Care and Feeding Young Children," "What the St Young Children," "What the State Board of Health is Doing to Prote the Health of Its Citizens," "To Dangerous Effects of Patent Medicines" and "The Preservation of the Natural Teeth." This year's coun includes talks on "Rational Bat Feeding," "Bodily Effects of Ra and Fear," "Spectacles and Englasses, Their Use and Abuse," and ther subjects of practical interest." other subjects of practical inter The lectures given in the past h proved of value and so popular that they are now being issued in little pocket-sized volumes at popular prices under the title of "Harrar Health Talks." In Minnesota the distributions in the second ly press is co-operating in the sa kind of work. A series of articles disease and its prevention by Dr. P. Lyon, dean of the University Minnesota Medical School, recen appeared in the Minneapolis Journ The University of Missouri is the few state universities that he recognized the growing tendency the organization of a distinct depa ment on public health. A series bulletins for public reading and d tribution are being issued. The fi so far completed are on 'Bacteria an Disease," "The Prevention of Typho Fever," "The Prevention of Confa ious Diseases in Schoolchildren "Resuscitation" and "The Relation Sight and Hearing to Early School Life." Each of these univerities has apparently worked out its plans is accordance with the needs of its on particular field. In Boston, popula Sunday afternoon lectures, in Minne Sunday afternoon lectures, in sota, newspaper articles, and in M souri, pamphlets on specific subjectives to meet existing conditions. The significant fact, however, in the opi ion of The Journal of the Ameri Medical Association, is that our versities are recognizing their sponsibilities to the public and making serious, intelligent and pritical efforts to meet them.

PREPARING FOR FRISCO PRIZES

The Secretary of the State Board Agriculture suggests that the god farmers of every county get but preparing to win prizes at San Fracisco next year. The best way is prepare for winning firsts at the local home products show or county then sending it on to Sedalia to rais off the State Fair honors. Missouri best in agriculture and live god should be shown at the Panama-American Exposition. Will your share is there? Missouri should win as many prizes as in 1893 and 1904—why not

Ladies'

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men's

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Made of rich German Silver which has an extra finish, and is decorated with fancy flower border. This case has a mirror of good quality, and powder puff compartment and places for quarters, dimes and nickels, also a strong catch that will hold cards and bills. Attached to this Vanity Case is Size of case is chain. 31/4×21/2



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Made of seal grain with gusseted ends welted, heavy cloth lining, fitted with pockets for mirror, bottle, coin purse, etc., Bag measures 10½x8½ inches and is fitted with fancy French silver finished frame, has a double strap handle.



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Home Circle

FATHER IS COMING.

The clock is on the stroke of six, The father's work is done; Sweep up the hearth and mend the fire,

And put the kettle on! The wild night-wind is blowing cold, Tis dreary crossing o'er the wold.

He's crossing o'er the wold apace; He's stronger than the storm; He does not feel the cold, not he, His heart it is too warm-For father's heart is stout and true As every human bosom knew.

He makes all toil, all hardship light; Would all men were the same, So ready to be pleased, so kind, So very slow to blame! Folks need not be unkind, austere, For love hath readier will than fear!

And we'll do all that father likes, His wishes are so few! Would they were more! that every hour Some wish of his I knew!

I'm sure it makes a happy day When I can please him any way.

I know he's coming, by this sign, The baby's almost wild: See how he laughs, and crows, and stares;

Heaven bless the merry child! He's father's self in every limb, And father's heart is strong in him,

Hark! hark! I hear his foosteps now He's through the garden gate: Run, little Bess, and open the door, And do not let him wait! Shout, baby, shout, and clap thy hands! For father on the threshold stands. -Mary Howitt.

EARLY IMPRESSIONS.

By Sallie.

"Old Cane Mill' "Goose Quill's" makes me think of my grandpa's old sorghum mill, and the good molasses he made. That old Illinois farm was he made. That old Illinois farm was the most beautiful place in the world to my brothers and sister and myself when we were children. I used to think it was very near Heaven, be-cause grandfather was such a good man, and there was such a plenty of everything. All kinds of fruit and flowers, as well as vegetables, and the great prairie fields of grain. It was literally a "land of milk and honey," When we grew up we learned that there always had been plenty of everything on that farm but plenty of everything on that farm but money. Grandpa and our uncle loved their cows, sheep, horses and mules and hated to part with them, but that was what they were often compelled to do to get money. They compelled to do to get money. They sold eggs, butter, honey and the sorghum and fruit, but none of these brought in much money. I don't think they ever sold any corn or hay that was all fed to the stock. And every creature was well fed. I cannot remember if they had dry seasons in those days or not, but I do not believe they did. It has always conved to me they winter the seasons. seemed to me the winters were colder and the cold lasted longer than they do now, and the summers not so dry. And that was right here in St. Louis county and city, and within 50 years. Are the seasons changing? It seems to me the last years there is so much dry weather.
Will we ever come to be like China,
and like India, with their every few years drouth and floods, and famine?

Ought we to be such great wasters as every one says the American peo-ple are? I wish I had a part of the money that is spent in chewing gum or tobacco, or liquor. I would build a few orphan homes, or churches, and would buy grass seed enough to sow good part of our county (St. Louis) in blue grass. We have some neighbors (dairy people) and I'm always telling them they ought to buy grass seed to sow in their pastures (the pastures are so bare). It is nice to see

Aunt Samantha, our town has just been stirred up, by our Methodist Episcopal minister and a few good eople, about the liquor question, and the liquor party has learned that a little more and "those fool Method-ists" will make the town go dry. I hope to see the day when our great and good government will not lend its protection to a business so wicked, so vile. It does not seem right to license the saloon, to grant a certain class of men license to debauch others, the poor and ignorant, and weak, and especially the young, who can-not see what the outcome will be. If an intelligent man wants to sell his soul for a few glasses of liquor he may have the right to do so. not know. But this I do know, we ought to safeguard the poor deceived ones, and put it out of their reach. We may have poison in the house to kill rats with, but we are careful to keep it where the children cannot reach it. And our nation is under obligation to protect its children (be they children in reality or childish grown ups). I love my country, am proud I'm an American. My father was a soldier and fought for her, and I consider the poor black people (the little ones that are being offended) deceived by the salcon. build our roads, do the drudgery, the hard manual labor, are another class that the saloon gets hold of and deceives

The local paper can do a whole lot towards cleaning up a town or vil-lage. The editor of our Valley Park Sun stood up nobly for the good of the town, and is still trying to hammer a little sense into the heads of the stubborn and dull ones.

I was glad to read of Rosa Au-umn. We used to like so much her pleasant letters and articles, and always looked for them. I remember some of them quite well. Papers were not so much in evidence Colman's days, and those World and the church paper instructed and entertained us.

Wheat is ripe, ready for cutting is week; corn is just coming up; meadows look bad and also gardens. O, for a good, hard rain! Everybody would enjoy it and be better for it Chickens are doing well this year.
I've noticed that a dry season is always good for raising young chickens.

NOTES FROM THE PARSONAGE.

Every day of the year 1914 has been a busy one for the mistress of the parsonage, and there has been little spare time for her favorite recreation, writing for the press.

The stork brought a dear little redheaded granddaughter to the parsonage as a New Year's present, and the little lady promptly asserted her "rights" as ruler of the entire house-hold. She was plump, perfectly de-veloped baby physically, but developed a serious case of stomach trouble before she was 10 days old; this was followed by a severe attack of earache that recurred daily for some time, and then later she had a deep-seated cold in the chest, that just missed being pneumonia, so I had all I could do, to keep up with the demands upon my time and strength, without writing for the press

As soon as the weather permitted, we begun work in the garden, and I have spent most of my time at work in it, and am proud of our success along that line.

The garden had been permitted to grow up in weeds, and there was enough weeds that went to seed last year, to furnish seed for one hundred acres of land, so it has required con-stant, persitent effort, to keep the weeds under control.

We plowed the soil deep, and then have kept up a continual cultivating of the surface of all the garden, both to the weeds getting a start, and I find that our garden is standing the dry weather better than most of my neighbors' gardens are.

I sugested to the Ladies' Aid Society cattle in a rice grassy pasture, but of our church that we try canning it looks bad to see them in a big vegetables and fruit for market as a pasture hunting for a few blades of means of raising money, instead of

quilting for other people, as it requires several weeks to finish one quilt, when we can only meet one afternoon every two weeks, and we only receive 50 cents for each spool used the husband of one of our ladies said, we earn about 5 cents each, for a half-day's work, and this does not pay for our efforts at all.

After explaining the matter to them, there were enough who were suffici-ently interested to try it, and who agreed to help me out in the venture, so I ordered a canning machine, as I wanted one for my own use anyway. My machine has a capacity of about 16 3-pound cans at one time, when put in the machine in a single tier, but we can cook two tiers of cans at one time,

which doubles the capacity.
One bushel of tomatoes will fill 18
3-pound cans, and if we all learn to work rapidly, we can put up quite a lot of tomatoes in one afternoon. have already set out 600 tomato plants, and will set at least 150 more, and I have a nice lot of string beans, beets, and cabbage coming on, so if the dry reather does not cut my crop short, I shall be able to test out my plan satis-

The country church problem is being discussed in farm papers, religious papers, and the leading magazines, and seen but few articles that touched the heart of the question as I see it, because-practically all the articles were merely theoretical, and gave no real help for solving this question which is becoming more serious than the majority think

is growing more and more difficult to secure attendance at Sunday school and church services unless some special attraction offered that promises to entertain and amuse the audience; I was taught that we attended church services to worship God, and not because we chanced to like this or that preacher, but we find people who, though members of the church, are ready to find some excuse for absenting themselves from the house of God, save they choose to go.

On the other hand we are encouraged to see some who are faithful attendance, at both morning and night services, and that, too, when it means driving quite a distance after services with several sleepy little folks to care for, and mothers know what this means.

I trust that all who read this, may be encouraged to be faithful in attendance, and feel called upon to speak encouragingly fo their pastors and Sunday school superintendents, as they are much in need of encouragement many times

MRS. ANNIE H. BAUER.

SEEN IN SHOPS.

Practical and attractive are the four-in-hands, silk-finished without a lining so they launder ad-

A smart blouse of white China silk has lacings of black ribbon for fastening in place of the usual buttons.

Very attractive are the brass knockers for guestroom doors, and so varied is the assortment that one is sure to find two or three to one's liking.

A useful garden tool is the combination, "five-in-one." This utensil comthe fork, hoe, weeder, trowel bines and dibber

It is possible to get the bolster rolls covered with white sateen or ticking

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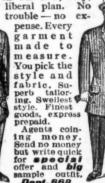
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to match the coverings for mattresses or box springs. They usually measure 11 inches in diameter.—Newark

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IMPORTANCE OF A GOOD FARM PAPER.

Editor Rural World:-The weather Editor Rural World:—The weather has been favorable for growing crops this spring, though we had a tiny drouth in May. This is June 5th, and a very warm and bright day. The ground has been soaked lately by heavy rains, and the appalling thunder storm has created some conternation among mortals here in sternation among mortals here in Dade county, Mo., as two dwelling houses and one barn in this locality were burned by the lightning.

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The main topic of conversation among the farmers here for the last two weeks has been about the invading foe that has been devastating our adows and some of our corn fields, mown as the army worm, and they have been more numerous than those barbarians, the Huns, were centuries ago, who tried to annihilate Europeon civilization. The hot weather and the floods have thinned the ranks of the pests, and many of them are looking for a better country, and I think the war is over. But they made the timothy suffer, and were too nice to eat weeds. No great amount of wheat or corn has been destroyed, but timothy hay will be scarce next winter. The worms appeared to have no use for alfalfa, potatoes, and garden truck. The oat crop will be

Most of our neighbors have had no

experience in regard to army worms, and when the first rumors came of the advancing foe men were almost panic stricken as they looked forward to what might be calamitous and distressing. There appeared to be millions of them just a few days ago, but lions of them just a few days ago, but today there is hardly any to be seen. I have a 15-acre field of timothy on the bottom that I will not need to cut as there is only stubs and weeds left. Across the creek from this piece was another meadow, and at the spring a foot log stretches across the stream, and after the worms had stream, and after the worms had harvested the bottom meadow they began to look with covetous eyes on the adjacent field of timothy across the branch, and after much dexterous management their leaders at length found the log, and the invasion of the territory beyond the stream commenced, but after the van of the crawling army had effected the passage of the stream, we concluded that it would be a wise set to throw that it would be a wise act to throw one end of the log in the water, and this was a piece of tactics they were unprepared for, and by this means probably several thousands of acres of crops were saved from the destroyers.

Wheat harvest will commence June 10th; the crop will be good. Pota-toes are fine, as well as garden vege-tables, but fruit will be rather scanty, many trees are dying.

The idea seems to be prevalent

9986

that most of the Home Circlers are not doing their duty, and that the time honored page is not what it once was. Now, friends, this is all wrong. If we have any light we ought to let it shine, for the day is coming when no man can work, and when the lamp of life goes out it will be sad indeed if we have nothing but leaves to show. Life is too short for us to remain idle. It is all right for us to remain idie. It is all right for us to try to get bread and meat, but God expects us to do something for the good of humanity. Can we not say something that will lead some poor soul heavenward? That man's life is a failure if he has no other ambi-tion than to pile up dollars.

The editor is doing his best for the grand old paper that has existed nearly 70 years, and there is a work for us to do. It is better to give than to receive. Let us show the Rural World to friends and neighbors and try to get subscribers, and let us not ton of the better that her better to give the property of the better that her better the property of the better that her better the property of the better that her better the property of the better the property of the better the property of the better that her better the property of the better the property of the property of the property of the better the property of th stop at that, let us do what we can for the elevation and uplifting of humanity. Let us do some thinking, let us think of something that will benefit mankind both in spiritual and temporal matters, and then let us put those ideas on paper and mail it to those ideas on paper and mail it to 718 Lucas avenue. Articles that will amuse are useful, but articles that will instruct are better. While attending political and other meetings 1 sometimes take a copy of the Rural sometimes take a copy of the Rural World and show it to certain ones who I think would be apt to appre-ciate it, and who might become sub-scribers, but I always tell them to send their money to headquarters, so I do not know whether I have made any conversions or not. It is wonder-ful how economical some people are in regard to good reading matter in their homes. Some will send their children to a costly seat of learning and then when school days are over they think the work is completed for all time, and that it is not necessary to provide literary matter for the children in their own homes. It is likely that the dark ages have not yet come to an end, for I have lately con-versed with conceited men who consider themselves as possessed of ordinary intelligence, and yet these men believe that the earth is a flat piece of ground indefinately extend-

ed in space, and that the sun, moon and stars perform revolutions around it every 24 hours, but they do not know how the sun gets through the know how the sun gets through the earth, rocks and stones, at eventide, nor do they have any idea of the enormous velocity of motion that the stellar orbs would be subject to under such conditions. No amount of argument can be produced to convince such men that celestial distances can be computed by trigonometrical figuring. If all college professors in our country were to swear to the truth of astronomical knowledge, as now taught, such men would still be unbelievers.

J. M. MILLER.

J. M. MILLER.

ORGANIZING HOMEMAKERS' CLUBS.

Miss Bab Bell of the office of the Secretary of the Board of Agriculture is organizing Homemakers' Clubs throughout the state. Her time is now being rapidly engaged for months ahead. During the early summer she will demonstrate home canning, a part of the activities of rural home life that

CROP OUTLOOK IS CHEERING.

The crop outlok over the state is more cheering than it has been in the past six weeks. Bountiful rains over most of Missouri have saved the corn and the truck stuff. The wheat crop is better than it first seemed, and the harvesting has proceeded speedily. The dry weather permitted the steady plowing of corn, thus giving the wheat the right of way later. The oats crop, like some of the hay crop, disappoints.

My Dear Editor—By buying my big-boned, long-bodied Poland China early spring pigs now, your readers can get first choice, they can buy cheaper, save on express charges, and they can develope the hogs to their own taste.

You may also state that if they are not ready to receive them now, I will book their orders for September delivery and set them aside for them now.

Yours truly,

J. P. VISSERING.

PATTERNS FOR RURAL WORLD READERS.

In ordering patterns for Waist, give bust measure only; for Skirts, give waist measure only; for children give age only; while for patterns for Aprons say, large, small or medium.

9986. Ladies' House Dress. Cut in 7 sizes: 32, 34, 36, 38, 40, 42 and 44 inches bust measure. It re-quires 5¼ yards of 44-inch material for a 38-inch size. The skirt measures 1% yards at the lower edge.

9970. Ladies' Apron.

Cut in 3 sizes: Small, medium and large. It requires 3½ yards of 36-inch material for a medium size.

9606. Girls' One-Piece Apron.

Cut in 5 sizes: 4, 6, 8, 10 and 12 gears. It requires 2% yards of 27-inch material for an 8-year size.

9983. Girls' Dress.

Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 31/4 yards of 36-inch material for an 8-year size.

Dress With Over Blouse for Misses and Small Women.

cut in 4 sizes: 14, 16, 17 and 18 years. It requires 5½ yards of 27-inch material with 2¼ yards for the underwaist, for a 16-year size. The skirt measures about 1½ yards at the lower edge. lower edge.

990. Ladies' Dress With or Without Flounce or Tunic.

Cut in 6 sizes: 34, 36, 38, 40, 42 and II inches bust measure. It requires 6% yards of 44-inch material for the dress in a 36-inch size. If tunic and flounce are omitted it will require 4% yards. The skirt measures about 1% yards at the foot.

716. Girls' Under Waist and Drawers.

Cut in five sizes: 4, 6, 8, 10 and 12 years. It requires % yard of 36-inch material for the waist and 1 yard for the drawers for a 6 year size.

9989. Girls' Dress.

Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 25% yards of 44-inch material for a 6 year size.

These patterns will be sent to RU-RAL WORLD subscribers for 10 cents each (silver or stamps).

If you want more than one pattern, and 10 cents for each additional pattern desired.

Fill out this coupon and send it to 9716 COLMAN'S RURAL WORLD, 716 Lucas Ave., St. Louis, Mo.:

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HELP WANTED.

TWO YOUNG MEN—Want positions as milkers or farm hands. Good habits; experience and references. State wages. Give full particulars. James Kelley, Mason City, Ia. care Wm. Lants.

MEN AND WOMEN wanted for Government jobs. \$85 to \$150 month. Vacations. Life jobs. "Pull" unnecessary. List of positions available sent free. Write immediately. Franklin Institute, Dep't. H 167, Rochester, N. Y.

HUSTLING man under 50 years wanted in each locality. To join this society and introduce our new memberships. Part or full time—\$50.00 to \$500.00 monthly. Experience not required. Address, The I-L-U 2021, Covington Ky.

FARMS AND LANDS.

WANTED—To hear of good farm or un-improved land for sale. Send description and price. Northwestern Eusiness Agency, Minneapolis, Minn.

LIVE STOCK.

NICELY MARKED GUERNSEY CALVES Either sex, \$20 each, crated for shipment. dgeworth Farm, Whitewater, Wis.

BERKSHIRES, splendid lot of pedigreed erkshires, all ages. Pigs, \$10 each. H. H.

BIG TYPE Poland-Chinas, of the largest and most prolific breeding. Write today for what you want. Highland Stock Farm, Piggott, Ark.

BIG TYPE Poland-China pigs, sired by a son of Cooper's big Bane, 2 others by Postage Stamp, 59,612. Priced to sell. Wm. Campbell & Son, Pinckneyville, Ill., R. D. 5. STALLIONS FOR SALE, 1,700 black Percheron, 1,200 bay Denmark, fine indi-viduals; fine breeders. Should sell for \$800 or \$900. A snap at \$550 for both. Write me. J. S. Mesaick. Ollinon. Mo.

POULTRY.

FOR SALE—Full-blooded Mammoth Pe-kin ducks. Eggs \$1.00 per setting. Mrs. A. Brower. Rinehart. Mo.

SEED AND NURSERY STOCK.

SWEET CLOVER SEED—Pure white and large blennial yellow. Prices and circular sent on request. Bokhara Seed Co., Box D., Falmouth, Ky.

SPLENDID OPPORTUNITIES to repre-entatives everywhere to sell trees and lants; experience unnecessary; liberal erms: outfit free. Cash weekly. Devote sentatives everywhere to sell trees and plants; experience unnecessary; libera terms; outfit free. Cash weekly. Devote part, or all time. Write for particulars Fayetteville Nurseries, Dept. 21, Fayetteville, Ark.

FETERITA—Pamphlet giving experience with this drouth-resisting grain and forage crop. Will mature after oats or wheat crop. Pure, high-testing recleaned seed \$2.75 single bu.; \$2.56 in two bu lots; sacks free. H. M. Hill, Lafontaine, Kan., R. 1.

MISCELLANEOUS

MAGAZINES, 50c worth for 10c, postpaid, and ones, 10c. Emory C. Pharr, Sycamore,

WANTED—To buy 5,000 mink and forces \$2.00 to \$5.00 each. Beschhurst Co., Shelby-ville, Ky.

WANTED—To buy good Angora Goat Buck; must produce long hair and be free from kemp. Address 4263 Virginia Av., St. Louis, Mo.

BIG MONEY—Selling Womack's Adjustable Window Curtain Holder. Sells in every home. Agents' outfit, prepaid, \$1.50. Write me today. A. O. Womack, Horatio, Ark.

SAN FRANCISCO FAIR!!! Do you want to go there next winter?????! Spend a penny foa full paticulars. Send us a card and we will forward literature telling you how to make money in spare time. Compton Bros. Agency. Findlay, Chie.

Horseman

Rythmell, 2:06½, has worked in 2:16¼ for Bert Shank at North Ran-

Harness racing is on this week at Dufferin Park, Toronto, Ont. Fred Upton, the popular starting judge, is giving the word. .

A. Shibley, Oregon, Ill., shiped his six-year-old mare and a two-year old filly by Exalted, to the Libertyville track and will do his own

The trotting mare, Amo K., 2:20¼, by Millerton, 2:28¼, recently foaled a fine bay filly by Sam Goldstein, 2:22¼, owned by F. R. Goodall, Beloit, Wis.

The pacer, Trojan, 2:09¼, holds the season's record at North Randall with a mile in 2:09%, last week. The son of Milton S., p, 2:08%, came the last half in 1:03%.

Wm. Edington has shiped nine head of horses owned by George W. Neise of Chicago to the Libertyville, Ill., track and has engaged Ed. Eychner as second trainer.

The Trinidad-Las Animas County Fair, scheduled for Trinidad, Colo., Sept. 22 to 25, has been declared off, action to this end having been taken at a recent meeting of the fair board.

Major Brooks, 2:154, one of the good trotters on Ohio half-mile tracks last year, will make his first start at Greenville, the inaugural meeting of the Ohio Racing Circuit, June 23 to 26.

J. H. Aulger, Roodhouse, Ill., has worked Axcybeta, by Axcyone, dam Lady Isabella, by Gambetta Wilkes, in 2:18%, last half in 1:03%, and will be ready to start at the opening of the Cedar Valley Circuit.

Dr. John Scott, Peoria, Ill., will do the starting at the Yorkton, Sask. meeting June 9 to 11, and will continue through the Western Canada Fair and Racing Circuit. Dr. Scott will have a busy season as starter.

At the nineteenth anual meeting of the Gentlemen's Driving Club of Cleveland, Ohio, H. K. Devereux was re-elected president, W. P. Murray vice-president and F. L. Chamberlain secretary-treasurer.

The intercity matinee of the Amateur Driving Club League will be held July 17 and 18 over the North Randall, Ohio, track. This comes at an opportune time, just previous to the opening of the Grand Circuit at Cleveland.

COLT'S FEET NEED ATTENTION.

"Poor feet and legs found upon the large majority of horses are due rectly to the lack of proper care of the colt's feet," says W. H. Palmer of the College of Agriculture, Ohio State University. "To neglect to see that the foot grows out evenly," he continues, "is to contribute to a poor set of legs. which influence directly the efficiency of the horse when used later. As the colt grows, it may throw more weight on one side of its feet than the other, causing that side to wear faster and producing an unbalanced condition. Nature, in her attempt to overcome this, causes the bones of the legs to adjust themselves to this condition, resulting in poorly placed and developed legs. Then the added weight to one side may cause the uneven development of the hoof. The ideal foot is one that is large and round, with the wall at the quarters sloping the same on the inside as the outside and the heels wide."

INTERSTATE SHORT SHIP CIR-

The saying that "there's nothing new under the sun" is a very accu-rate one, generally speaking, but apregion. The title of the new circuit and bran.

is the Interstate Short Ship Circuit, and it is made up of associations in five towns-Nevada, Mo., dates Sept. 1 five towns—Nevada, Mo., dates Sept. 1 to 4; Butler, Mo., Sept. 8 to 11; Lamar, Mo., Sept. 15 to 18; Lockwood, Mo., Sept. 22 to 25; Uniontown, Kan., Sept. 29 to Oct. 2. There are six uniform classes offered through this entire route, viz.: 2:16 trot, 2:25 trot, 2:35 trot free-for-all page 2:20 page, 2:30 trot, free-for-all pace, 2:20 pace, 2:30 pace, and for each a purse of \$200 is offered. Excellent conditions govern. A horse may start in any class for five per cent entrance fee, and if no start is made only two and one-half per cent is charged, providing the payment is made at the time entry is sent in. J. Youngs of Lockwood is president of the circuit, and C. C. Woods of But-ler secretary. The secretaries at the various towns are: Nevada, Sam A. various towns are: Nevada, Sam A. Cubin; Butler, C. E. Robbins; Lamar, John Pahlow; Lockwood, Dr. R. A. Frye; Uniontown, W. A. Stroud. For horses that lack the higher class demanded in the larger organizations, this circuit offers a splendid chance to race five weeks with but small ex-penses, and with the liberality of the conditions considered, we can see no reason why it should not be one of the popular circuits of the Southwest this season.-Western Horseman.

RAISING AN ORPHAN COLT.

What is a good method of raising by hand a colt that has not mother?-L. B., Tioga County, Pa.
This question is quite fully answer-

ed by Dr. A. S. Alexander of Wiscon-

At all times supply pure, cold drinking water. Let the foal run out in a lot or grass paddockf or exercise. Accustom it to be handled daily. Feed small quantities of nutritious food often, keeping all food vessels clean, and the foal should thrive and develop Remember that a colt should at all times be adequately fed so as to develop perfectly. Practically half of the weight of a horse is gained during the first twelve months of its life. If stunted during this period the colt

Investigators have established, says a U. S. Department of Agriculture bul-letin, that this horse disease can be controlled effectively only by a total change of feed and forage. It is obvious that there is a direct connection between the green forage, exposed pasturage and newly cut hay or fodder which the horses eat and this disease Great care must be taken that horses do not obtain the dangerous forage unknown to their owners. The owner of one farm informed the department investigator that his dead horses had eaten nothing but old hay and grain.

"But what about the closely cropped grass in this pasture?" remarked the

never develops properly; it therefore pays to feed generously.—Rural Life. BLIND STAGGERS OF HORSES.

investigator, noticing the adjacent field. "Oh!" answered the farmer, inno-cently, "I always turn the workhorses into pasture over night.' Many horses have died from blind

GOOD WORK HORSES.

sin. The foal may be raised on cow's milk, says, Dr. Alexander, if the attendant conducts the work patiently and intelligently. Choose the milk of a cow that has recently calved, preferably one which gives milk low in butter-fat, for mares' milk, while rich in sugar, is poor in fat. Sweeten the milk with molasses or sugar and dilute with warm water. Give a little of this pre-pared milk at short intervals from a scalded nursing bottle and large rub-ber niple. Be careful to keep the bottle and niple scrupulously clean. Add an ounce of lime water to each pint of the prepared milk and allow half a

cupful once an hour at first.

As the foal grows, gradually increase the amount of milk fed and lengthen the intervals between meals. In a few days food may be given six times a day and later, four times daily. The foal will soon learn to drink from a pail, if allowed to suck the attend-

ant's fingers at first.

Until the bowels move freely, give rectal injections night and morning. If the foal scours at any time give two to four tablespoonfuls of a mixture of sweet oil and pure castor oil shaken up in milk, and stop feeding milk for two or three meals, allowing sweetened warm water and lime water in-stead. Let the foal lick oatmeal as soon as it will eat and gradually increase the amount and ad wheat bran. In five or six weeks some sweet skim plied to racing circuits it would get as severe jolt just now, for there is a brand new harness horse organization born in the Central West and Southwest, which will afford plenty of racing this fall for the horsemen of that region. The title of the new circuit

staggers caused by eating mouldy baled hay. As soon as the hay was eliminated the disease ceased. Other horses in the vicinity not fed upon this hay failed to contract this disease. Later, some of the mouldy bales were opened and exposed to the sun for three or four weeks. After this the hay was fed to horses without produc-

ing any ill effects.

While medical treatment in the vast majority of cases has not brought results, nevertheless if it is used at all it must be prompt and before the disease has had time to run. The digestive tract should be cleaned out thoroughly at once. Active and concentrated remedies should be given. Afflicted animals, however, have great difficulty in swallowing immediately after being taken, so that these remedies must generally be given by injection. Arecolin in one-half grain doses, subcutaneously, has given good results as a purgative. Early in the disease urotropin in doses of 25 grains dissolved in water and given by the mouth every two hours, appears to have been responsible for the recovery of some cases of the malady.

After the animal has been purged,

the treatment varies according to the symptoms. The following measures have been recomended:

The first and most important: Feed only clean, well-cured forage and grain, and pure water.
Calomel, salol, and salicyclic acid, to

sults than antipyretics.

An ice pack applied to the head beneficial in the case of marked ners ous disorder.

One-ounce doses of chloral hydrate per rectum should be given if the m. tient is violent or muscular and are severe.

If the temperature becomes subm mal, the animal should be warmly blanketed.

VICE IN HORSES.

In nearly every instance vicious us. imals are the product of mismanas ment and ignorance on the part of who have been in charge of The horse is the most intellithem. gent creature and posesses great pow-ers of discrimination. He trusts those who treat him with consideration, but he also remembers the harsh word and the hasty lash, says American Culti vator.

If repeatedly overloaded or subject. ed to the torture of a cruel bit and a heavy hand, is it to be wondered at that he develops into a "jibber" and absolutely refuses to start? This indicates the horse's intelligence, although jibbing is generally considered Some horses will jib at starting if held tightly and not allowed to start quickly. This may be attributed to nervousness and want of self conf-dence. If such an animal is allowed to "get quickly off the mark," he may forget the habit. True, he may rush the hills at too fast a pace, but when he finds he is not checked, and is able to negotiate them safely, he will settle down, and before long learn life's lesson and take things more quietly.

Crib biting and wind-sucking are habits largely begotten of idleness and weariness, and are prevalent in army stables and in studs kept for show purposes. Idleness is as bad for the purposes. horse as for his master. To while away the time the animal catches the edge of the manger with his incisor teeth, and powerfully contracting the muscles of the throat and neck, is able to swallow air. This sooner or later leads to gastric and intestinal derangement, attacks of colic and mal-nutrition. It has been known that a six-months-old foal developed the vice when standing in a loose-box preparatory to show. Some are of the opinion that the habit is "infectious" or communicable to other horses; hence, it is unwise to keep such an animal in close company. Many devices have been adopted to cure this habit, such as perforated bits, neck straps, and other ingenious contrivances, but they prove of little avail. Regular work and plenty of it, or turning the horse out to grass will probably mitigate the tendency to indulge in the habit, but on resumption of enforced idleness it invariably returns.

Shying, another so-called vice, is frequently due to defective eyesight, and has caused many serious accidents. Some horses shy from freshness and high spirits, but in such cases the remedy is simple. Bolting is another dangerous pastime indulged in by some horses, and while it may be called a vice, it is usually acquired in the first instance as the result of an accident or fright. It is remarkable that bolting is not more common, for practically any horse would be able to overpower the ordinary driver if he

so desired.

FARM HELP BUREAU.

If a farmer wants hired help or if the farm hand wants a situation, either may be made happy by correspond-ing with the Secretary of the Board of Agriculture in Jefferson City (who

finds the help).

Just now hundreds of young a and also men with families are seek ing jobs in the country. Every farmer who wants to solve his help problem should write at once to either of the above public servants. First class help can be furnished promptly.

FARM LIFE BULLETIN DUE.

The "Country Life Conference" bulletin will be ready for mailing from the office of the Secretary of the State Board of Agriculture at Columbia It will be within the next two weeks. It will be one of the most helpful publications ever issued in Missouri on rural problems.

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Each year brings added interest in Each year brings added interest in practical methods of storing eggs for winter use. Many experiments have been conducted that the very best methods could be determined with the result that water glass is recommended as being the best.

To 15 parts water that has been boiled and then cooled add one part water glass. Stir very thoroughly and the solution is ready for use.

Earthen ware is said to be the best containers but we have used five galcontainers but we have used nive gal-lon kerosene cans and found them to be equal in every respect. Any tin re-ceptacle is good, but they must be clean and free from any odor that is likely to flavor the eggs.

Fill the receptacle about one-third pill the receptacle about one-third full with solution and place in a cool room, preferably a cool, clean and well rentilated basement. Eggs should be gathered at least every day and when the weather is very warm it would be much better if they were gathered at non and at night. The eggs should be placed in the solution as soon as gathered. Only eggs that are known to be strictly fresh should be stored.

The males should be separated from the hens when eggs are to be stored. A sterile egg will keep for days or weeks under conditions that will spoil a fer-tile egg in a very few hours. It is much better to store only sterile eggs but fertile eggs will keep very good if stored when absolutely fresh, and be much better than the storage eggs that we find on the market. There should be about two inches of the solution covering the top layer of the eggs. Eggs stored in this manner will keep

for many months but it must not be expected that the water glass solution will improve the quality of eggs. If eggs that have already started decomposition are stored it is quite likely that after several months in the solution that they will be in a very bad condition. Store only fresh, clean eggs and they will keep in perfect condition for many months.—Pren Moore, Poultry Husbandman, Idaho Experiment Station.

While early chicks are desirable, to while early chicks are desirable, to make winter layers, they must not be hatched too early. If early chicks have not good care, shelter and warmth their growth will be checked and they will probably never make good layers. Under ordinary conditions it is better to hatch them later when the weather is more favorable. The best first feed for newly hatched ducklings is made of one part sifted

ed ducklings is made of one part sifted commeal, one part wheat bran, two parts stale (not moldy) bread and a parts state (not inclus) break and ittle fine grit and finely granulated charcoal sprinkled in, the whole mixed damp, but not wet, with milk. Water will do for mixing if milk is not available.

The condition of the roosting quarters has some influence, indirectly, upters has some influence, indirectly, uponegs production. Unless the poultry quarters are kept free from vermin and filth of every description, and good ventilation is provided, the fowls will be compelled to desert their quarters. It is but natural that they should desert foul, ill-smelling, bot quarters for the more inviting conditions which the fences and trees offer them for the time being. Whenfer them for the time being. When-ever the fowls show a tendency to prefer roosting on fences and trees, it may be taken as pretty conclusive evidence that the conditions within the hen house have become such that they can no longer be endured.

Always plant strawberries in the spring. Any soil that will grow a sood crop of potatoes is suitable to the strawberry. Pick off all blossoms for the first year up to the first of August. The fall-bearing varieties should be allowed to blossom after that time. The Senator Dunlap is the best kind of the old June-bearing sorts; the Progressive the best of the ever-bearer. gressive the best of the ever-bearer.
All strawberries should have a cover of marsh hay or straw as soon as the ground freezes hard enough to hold up a wagon. Put on enough to hide the plants, and a little more will do no harm. The object is to protect om alternate freezing and thawing, and to keep out the drying winter i



33-PIECE DINNER SET AND 41 EXTRA ARTICLES DESCRIPTION SEND NO MONEY--- 41

We have given a great many of these dinner sets to readers of our big farm paper. But we are not satisfied—we want to distribute a great many more of these magnificent 33-piece dinner sets—and you can have a set if you only make up your mind to read this announcement. These are not ordinary premum dishes—they are made of pure with ordinary care. It only requires a few minutes every now and then, and this magnificent set of dishes belongs to you.

Be the first person in your neighbor set alone will more than repay you for the little favor lask of you, but we are going fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large fight now, and mail it to me today, and I will send you one of our large favor I ask of you, but we are going favor I ask of you, to give you a splendid set of 40 beautiful high-class souvenir post cards an extra inducement for you to be prompt. Even though you don't component with the post of the dinner set alone will more than repay you for the little favor I ask of you, up a splendid set of 40 beautiful high-class souvenir passe of the very best needles in all useful in may colors (no trash) as an extra inducement for you to be prompt. Even though you don't component that the distance of the distan

The Complete Set Consists of:

- 6 large plates, 6 teacups
- saucers.

- 6 butter pattles.
 6 fruit or cereal dishes.
 1 deep vegetable dish.
 1 large meat platter.
 1 large cake or bread plate.

Every piece in this large 33-piece dinner set is of high grade material, perfectly white, and large enough to please the most particular house-

perfectly white, and large enough to please the most particular house keeper.

The design on each plece is made to our special order and the red roses with the green feliage is so real that they seem to only lack their natural fragrance. The edge of each piece is finished with solid gold trimmings—the kind that positively won't wear off. Our dishes are prepared by a secret process; the delicate enamel finish on each dish will not graze or get streaky when washed. Indeed, your dishes will be just as white and clear in a year from now as they are the day you receive them, provided you take ordinary care of them.

If you could buy these dishes from your local dealer they would cost you so much money you probably would feel you could not afford them. But they are not for sale—they are made to our exclusive order by the best known pottery in America, the Owen China Company of Minerva, Ohio, and each dish bears the trade-mark of the Owen China Company, thus guar-anteeing them to be genuine Owen Chinaware. You will find Owen Chinaware. You will find Owen Chinaware for sale in only the best stores—but our special rose design is made only for our big family of friends and subscribers.

Every woman needs needles, and when your neighbors see this splendid great big needle case, they will want one just like yours. If they like it, tell them that they can have one of these large needle cases if they will hand you 25 cents in connection with a SPECIAL OFFER which I will write you shout when you girn the country. you about when you sign the coupon.

You won't have a bit of trouble in getting 16 of your neighbors and friends to accept this special offer, and after you have collected 25 cents from each of them the set of dishes is yours forever. You can do this favor for us during your spare time. The children can help you and they will be glad to do so. Hundreds of successful dish earners have earned their dishes the same day they received their needle cases.

You take no chances in signing the coupon, because, if you get sick or for any other eason fail to earn the dishes, we will pay you well for what needles you dispose of.

I also include with each set of dishes my plan for paying the freight charges on the dishes. My whole plan is so simple and will take up so little of your time t'at you can't fail to get sick or for any other eason fail to earn the dishes, we will pay you well for what needles you dispose of.

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COLMAN'S RURAL WORLD,

Saint Louis, Missouri.

But that's not all by any means—we have an extra surprise gift that we will pack with your dishes, and which you will know nothing about until you receive them and open your crate—just like the woman above is doing. This surprise gift is a beauty—something every woman will go into raptures over. I'll tell you more about it when you send me your name.

I also include with each set of dishes my plan for paying the freight charges on the dishes. My whole plan is so simple and will take up so little of your time t'at you can't fail to earn a set of these dishes if you only make up your mind to do so, and sign the coupon below.

Remember, the coupon starts every thing-sign it right now-quick.

MAIL THIS COUPON TODAY

Colman's Rural World, St. Louis, Mo.

I want to get a 33-piece dinner set and the 41 extra gifts. Send me the sample needle case, picture of the dishes in color, and tell me all about your big offer. It is understood I am placed under no obligation in signing this coupon.

Name	***	*******	**********
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R. F. D. State

From the Producer To the Consumer

HARVESTING AND MARKETING HORTICULTURAL PRODUCTS.

(Frank Farnsworth, Contestant Gideon Memorial Prizes, 1913, Minn... Agri. College, St. Paul.)

During the past few years so much has been said concerning the production of better agricultural and horticultural products that in many instances the disposal of the product to advantage has in a large measure been overlooked. Since fruit is now regarded as practically a necessity in the household, the deprivation of this article of diet causes greater discomfort than heretofore when it was regarded more as a luxury.

Before our insect enemies became so numerous the farmer's orchard furnished plenty of fruit for his family, and little regard was given to the disposal of the surplus to advantage. This was due partly to difficult means of transportation and of communication with the market, but chiefly to the lack of a general demand for fruit.

Today, however, with the steady advance of horticulture as a scientific business in itself, and with the in-creasingly sharp demand for a good horticultural product, the matter of economic harvesting has become as highly important as that of production.

Some of the methods in use on an Ohio fruit farm might be of interest. This farm is located 15 miles southof Toledo on a division of the Ohio Electric Railway. One hundred and ten acres are in orchards that range from one to 40 years in age. Intercropping is practiced with both horticultural and agricultural crops.

The small fruits, consisting of straw berries, cherries, and currants, are all picked by men, women and children. These pickers either come from town, a mile distant, or come in on the electric, or drive and walk from the surrounding country. They receive checks for their fruit as they bring it to one of the sheds which are distributed over the patch. These sheds are built on runners which make it possible to draw them to different patches and orchards for packing. Here the fruit is examined, and in the case of cherries it is poured from the five-quart picking basket into the quart These quart baskets are then basket. checked up and packed into crates, each holding 32 quarts. The name of the grower and shipper, together with the name and trademark of the farm, appear in green on a pink slip that is laid on the top of the fruit just be-neath the cover of the package. By frequent use of the long-distance telephone daily market quotations are obtained from the different points within 150 miles, and shipments are directed accordingly. While the bulk of the shipment goes to the highest market, yet, the dealer who for the time being offers a little less is usually sent some also. This plan keeps the fruit before customers in the various markets and often helps out the dealer, for which he will feel more obligated to the grower in time of a general low condition of prices

When grocery orders call for fruit early in the day, hourly electric rail-way service, both north and south, permit the shipment of fruit as soon as it is packed, and in many cases it is consumed 60 or 70 miles away on the same day that it is picked.

The method of handling the later

summer fruits, apples, pears, plums and peaches, is somewhat the same as with the earlier fruits. These, how-ever, are gone over from three to five times, by men who work either by the day or by the month. At each one of these pickings only the fruit that will is picked in this manner, and the sound fallen fruit is picked up, the fruit is set onto a low orchard wagon, hauled into a central packing shed and set onto a bench that is the same height as the wagon. From this bench the fruit is carefully poured from the picking baskets onto the inclined sorting tables. These two sorters are about three and one-half feet long

slightly sloping and padded to prevent bruising the fruit. With a bas-ket placed on each side of the person who is sorting, he can readily place the fruit in its proper basket as he takes it from the sorting table. The basket being packed, it is set on the scales and the weight stamped on, as required by law. It is then placed on the covering bench on the side of the shed opposite where it first was, and the pink label is laid on the fruit be-neath the red netting. The summer fruits are packed in fifth-bushels, halfbushels or bushel baskets, according to the market demands. In the case of damson plums, which are less attracthan some other varieties, a special damson slip is used stating their qualities for jellies and preserve. The quality of the German prune, with a special slip to advertise it, brings 25 cents per bushel more than the other varieties sell for in the same market.

From about the middle of August to the 25th of September, partnership is formed with a brother who has an adjoining fruit farm. Together they hire a trailer on the Ohio Electric Railway and have the exclusive right to it while they are shipping. Shelves are built in the car with a narrow aisle

sheathing, thus making in all, four dead-air spaces. An ice chamber over head, capable of holding a carload of ice, cools the air as it comes from the apple room through three six-inch pipes on each side of the ceiling of the apple room. The air thus cooled returns to the apple room through openings built in the side of the ice chamber. Artificial ice in 200-pound cakes is drawn up on a plaform to the cakes is drawn up on a plaform to the ice chamber. As ice is required only from about September 25 to November 15, approximately 40 tons are used during the season, the fruit being all removed before spring. The winter pears are barreled and sold in car lots.

The winter apples are sold mostly to grocers in Toledo. Their orders are taken from the crated apples in storage and are sorted, graded, and packed in half-bushel splint baskets with the grocer's slip placed beneath the red netting as with the summer fruit. A separate slip for the particu-lar variety is often included. For instance, in Tollman Sweets, the slip bearing the words "Tollman Sweets Good for Baking." This arouses the customer's interest and often brings sale for fruit whose appearance can not always be relied upon to sell it. Second grade apples are sold in the same manner, but are marked "Seconds." The desirable culls are either sold as cider stock or are sold in bulk. There are many advantages in this

basket trade. The majority of fruitbuilt in the car with a narrow aisle between them. The fruit set on these shelves carries well to market with-

BURNS BARRELS REMARKABLE PORTABLE COOKING AND HEATING STOVE

Dadant & Sons, Box L, Hamilton, III.

Complete BASEBALL Outfit

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WHAT USERS SAY "Only used half oil last week for cooking, baking ironing it oil last week for cooking, baking, ironing, ing, ili.—"It is clean, convenient, no-tron steadily; Per-feet Baking," Mrs. O. T. O.—"Bakes Pies, Cakes, Bread; never saw ing done." Mrs. J. Newark, Mich.—"Now meals so quick and easy." Mrs. M. E. K. "Baked, cooked, washed, ironed—can do my range does." H. M. Irey, Ia.—"Coof family of 6 for 5 days with several quarts Is a Great Time and Fuel Saver." Ving, Ind.—"Heated a room when the ter was 10 degrees below zero, with Radiator."



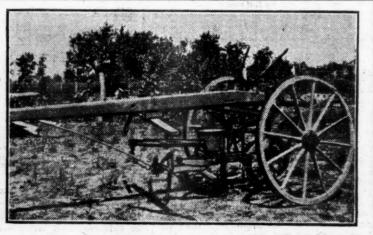
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stoves one order.' Head & Fraser, Tex., writestoves one order.' Head & Fraser, Tex., writesame chance. You should make World unsupplied. Get in early for today for our Money-Making particulars—send no money. WORLD MFG. CO. GOOF World Bidg. CINCINNATI, 0,

Delivered vor FREE on Approval and 30 days Trial



SEND NO MONEY



This is a one-row walking corn drill, home made. It was made and has been used for 10 years by William Mittendorf, Brookport, Ill. The frame is that of an old sulky plow, under which is a one horse corn drill. In front of the drill is a bar shovel 1½ inches wide, to loosen up the dirt and to prevent the drill bar from sliding over in hard ground.

out the usual bruising due to stacking the baskets. The car is loaded during the day as the fruit is ready at the packing shed, and by evening it is ready to be taken out behind the ex-press car. One of the growers checks up the shipment, puts it under lock and key and it is not handled till the commission man opens it at Lima, 60 miles south. Here the car is side-tracked, and he unloads it for the morning market. Thus all handling of the fruit by disinterested freight crews is avoided in m bulk of the summer fruit. marketing the

As no immediate market is sought for fall and winter pears and apples, the method of handling these two crops is necessarily quite different. crops is necessarily quite different. They are picked by men who are paid either by the day or month rather than by the basket. Basswood ladders, from 16 to 22 feet long, are used, and the half-bushel, round, wooden picking baskets are hung by iron hooks to the tree or ladder. All of the fruit, picked into square slatted crates during the day, is left outside over night to cool and is hauled into the cold storage on the farm in the cool of the morning. The storage is 30x40, by 14 feet high, built of concrete blocks which have an air space at each end, thus allowing a circulation within themselves. Ventilators at the top and bottom of the concrete walls permit the escape of warm air and the entrance of cold air. Inside of these concrete blocks are 2x2s covered with a layer of building paper, then another set of 2x2s covered with lath and plaster, and a third set of 2x2s and two and one-half feet wide, covered with building paper and to a certain extent he must meet this

ing of 60 head of cattle and hogs, and tree pruning when the weather is not too severe, affords employment for at least three or four men; and with employment assured the year round, a much higher grade of help can be

The basket package places the apples in the grocer's store ready to set into the delivery wagon, as he does any other article that he handles. This saves him the trouble of sorting them out of the barrel which is necessary in using the barrel package. His time is spent to greater advantage in his regular business, and we will all agree that the grower would rather have the return from handling his own fruit.

The dealers of practically all classes of products today realize that in order to carry on a successful trade they must get as close to the consumer as is possible, and that oftentimes conditions can be improved upon for the mutual interest of producer and consumer alike. One of the worst enemies of horticulturists today is the cull in the center of the package. mars the quality of all the rest of the fruit. Fruit-shipping associations are pack, but the individual himself must cultivate a desire to sell a uniform product, back of which he is willing to place his name and his reputation, fore he can give a square deal and demand one in return.

The popular demand of today does in a large measure dictate the variety of fruit and the method of packing which the fruit grower shall use, and

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and if he is to succeed. Neverheless, the horticulturist has a misrion to perform in the nature of educating the public to use a superior article, for he of all producers is to be credited with an article which does not inflame the passion nor becloud the intellect, but encourages good health and a resulting happiness to all who will make the proper use of his prod-

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CO-OPERATING WITH THE FARMER.

In the following communication a Missouri subscriber, Mr. I. Motes, outlines a kind of co-operation between farmers and bankers that is very far-reaching in its effect and general in its application:

Bankers' associations all over the West are promoting agriculture, horticulture, marketing, chicken raising, dairying and the live stock industry. There are many demonstration farms in every state in the West, and bankers are constantly planning meetings of bankers and farmers at these farms. Experts are brought to discuss vital problems, and the railways also have experts present to show the best method of packing produce and to give information about the most accessible markets. The whole prob-lem of marketing is gone into in a practical way. The establishment of cheese factories is encouraged, and co-operative creameries and ice co-operative creameries and ice factories are given substantial aid. Bankers are also prompt to answer inquiries from prospective immigrants.

The co-operation of bankers and railroad and business men with farmers is one of the most striking phases of agricultural progress. It brings better results than the mere co-operation of politicians, governors and other state officers with farmers, because co-operation with bankers, railroad men and business men bring practical results. Instead of the old antipathy which was encouraged by demagogues, there is now a spirit of mutual co-operation and a realization of mutual interest.

Bankers seem to have taken the lead in this matter of helping the farmers, because they have come to realize that in this way they are helping themselves. The benefit is mutual. Not only do they send circular letters to their farmer customers reviewing conditions as ascertained from many sources, but they work incessantly to improve conditions as to selection of seed, rotation of crops, the breeding of better live stock, the best markets and the best methods for shipping produce. In many counties bankers offer prizes for the best products raised by boys and girls. By these means they have succeeded in arousing a healthy spirit of rivalry money the yourse propuls in these among the young people in these counties, and boys and girls are taking pride in farm life instead of long-

ing for the city.

But in some sections of the West the work has gone much further than this. Following the experience in Kansas a few years ago, the Okla-homa bankers have been demanding, as additional security on notes, that a certain acreage in kafir corn be sown for each head of stock mort-gaged by a farmer. It is generally acknowledged that this rule or con-dition was the selection of the selection. dition was the salvation of many an Oklahoma farmer during last season's drouth. And it has brought wealth to many counties and towns well as men in some of the western states. The system, first begun in Butler county, Kan., in 1895, has transformed that county from one of the poorest into one of the richest, per capita, in the state. El Dorado, the county seat, has as much money in its banks at the present time as many other cities of five times its five population, and the stock farmers of the coutny are in a prosperous con-dition, yet in 1894 this county was on the verge of bankruptcy. The magic change has been wrought by kafir corn, alfalfa, stock raising and cooperation between farmers and bank-

This new order of things had its beginning back in 1895 because a colector of overdue paper observed that the farmer who had put in kafir corn was in relatively much better financial condition than his neighbor who South Bend, Ind.

had not. It was at his suggestion that the clause about the kafir corn planting was inserted in the notes. Farmers who at the time resented such "dictation" later thanked the bankers who, in trying to secure themselves, had brought wealth to the borrowers. It is being conclusively demonstrated in these modern times, that both farmers and bankers will profit more and more by the "get together" spirit.

It is not difficult to understand that after the first step is taken in

co-operative dealings between farmers and bankers there is then opened up a splendid opportunity for a harmonious working together of these

It is a well-known fact that where co-operative credit systems worked out in the old countries the borrowers are obliged to use certain systems of soil culture whereby the fertility supply is maintained. As that end is best attained in the corn belt by the keeping of live stock it is reasonable to suppose that the time will soon arrive when, for shorttime loans, the interest rate will be largely determined by the number of live stock kept on a given area. With the bankers the question of security for the loan is the first thing to be considered and when that is satis-factory a correspondingly low inter-est rate is forthcoming. The "get-toest rate is forthcoming. The "get-to-gether" spirit that is in the very at-mosphere is working out in the in-terest of all classes.—Iowa Home-

ADVICE TO FARMERS.

Editor Rural World: I believe it would be of interest to other readers of the paper than myself if you would give them some information concerning one of the most paying and least troublesome things in which a farmer can get money. I refer to what is commonly known as Yellow Root and more generally known as Golden Seal. Every person who has a bit of unused woodland or cuttings or underbrush should raise Golden Seal. The roots of this plant sold 15 years since at 30 cts. per pound. The price has steadily advanced and the root is now worth \$5.50 per pound. The dried leaves and stems now sell for 20 cents per pound. It is the most used and the most valuable drug known to the modern pharmacopia. It was brought to the attention of civilized men by the In-dians with the Lewis and Clark expedition. It is a very hardy plant, has a delicate white flower, yellow fibrous root, furry stock and large leaf. natural home is in the woods. It will thrive in any soil and in any state. Being antiseptic it is not subject to plant diseases. It can be transplanted successfully when in full blossom. It reproduces itself from seed and from the root. It matures in three years, but is not harmed if not dug at the end of the three year period. It can be raised under artificial shade, but that method is expensive. It can be planted in any woodland that has tree shade and will take care of itself and multiply and all that the owner has to do is to let it be and gather the leaves and stems every fall and lay them out to dry without any washing or wetting in an airy place, but not under a direct sunlight. At the end of three years the mature roots can be sorted out from the young roots and the mature roots washed and dried for sale while the others can be put back in the ground for future growth. the end of three years the raiser has a yearly crop of roots and beginning with the first year he has a yearly crop of leaves and stems. This is one crop on which you have an absolute certainty that you have a market that will run after you as soon as any Golden Seal buyer knows you have the goods to sell. Go and ask your druggist or your doctor about the value of Golden Seal. The supply has been wild stock mainly, but as the stock has become more in demand and the price has advanced, the hunters have more active and the wild stock is so scarce that little of it is being offered for sale. The planted roots lack so much of supplying the demand that big manufacturers of drugs have been driven to the necessity of using substi-

tutes. Go to raising Golden Seal. GEO. D. BEROTH.

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FOOD STUFFS AN INCREASING FACTOR IN IMPORTS.

Home consumption of domestic food stuffs has so nearly overtaken home production that the United States is not only reducing its sales of food stuffs abroad but drawing more largely upon foreign countries for certain of its food requirements. An analysis of the foreign trade during the first six months under the new tariff has been made by the Burgery and Domestic Comreau of Foreign and Domestic Com-Department of Commerce. From this it is shown that imports of stuffs in their natural condition, including food animals, increased from \$117,194,237 in the half year ended with March, 1913, to \$143,421,-536 in a like period ended with March, 1914; and that imports of food of the partly or wholly prepared food stuffs partly or wholly prepared for use in the same period advanced from \$95,744,241 to \$100,967,378. Thus the increase in importations of all food products in the period named amounted to over \$30,000,000, or an average of \$5,000,000 per month.

On the export side the figures are even more striking. Of crude food stuffs the sales to foreign countries fell off more than 50 per cent, while prepared food stuffs also declined, the write in smallers are restricted. prepared food stuffs also declined, though in smaller proportion. Ex-ports of the first named group fell from \$115,850,453 in the six months period of last year to \$55,483,787 in the half year which ended with March of the current year, and manufactured products from \$180,007,422. to \$162,022,620.

The articles of food showing the argest increases in importations during the six months under review are fresh beef, cattle, corn, wheat, rice, macaroni, fruits, molasses, and edible oils. We imported during the six months which ended with March last 550,000 head of cattle, or more than double the number imported in the corresponding period a year earlier; 83% million pounds of beef and veal, or over 50 times as much as a year ago; nearly nine million bushels of corn, or 30 times as much as in the corresponding six months of last year; 140 million pounds of rice and rice flour, or nearly 50 million pounds more than a year ago; and 66 milpounds of macaroni, vermicelli, and other similar preparations, as against 53 million pounds in the corresponding six months of the precedring year. Sugar is a conspicuous exception to the rule of increasing imports of food products. Of cane sugar the imports in the six months ended with March amounted to 1,650 million pounds, compared with 1,809 million in the corresponding six months of 1912-13, while of beet sugar the imports fell to one and a fourth million pounds, in comparison with 182 million pounds in the half-year period which ended with March, 1913.

While in many instances the above mentioned food products form a small proportion of the domestic consumption, as in the case of corn, wheat, and meats, the increase in imports in recent months has been so rapid as give promise of reducing before long the shortage of our own food supply.

Detailed statistics regarding imports and exports of food products are published in reports of the Bureau of Foreign and Domestic Comand are available not only in Washington but also in its branch offices at New York, Chicago, New Orleans, and San Francisco, and in public libraries of the principal cities

of the country.
Statements relating to specific food commodities, including their sources and areas of distribution are in course of preparation by the bureau and summarizations thereof will be published from time to time.

swine pasture it may be sown or drilled any time after the ground is ready in the spring up to July 1st. It be of advantage to furnish two or three lots of this pasture. The pigs will soon crop it down close, and if removed to another lot the rape will make a new and much more luxuriant growth from time to time, the size of the plant and amount of forage being greatly increased by occasional croppings.

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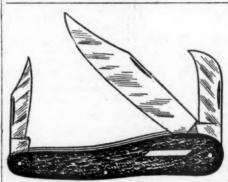
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3-BLADE CATTLE KNIFE PREMIUM No. 3

This is an important knife of exceptional value, finely finished and built for EXTRA HARD USAGE. The bone handle just fits the hand. When opened the knife measures 9½ inches. This knife is not a plaything, but built for business, and is strong enough to rip a cotton bale or cut a sapling. All three blades are of excellent quality.

PREMIUM No. 14

Our beautiful locket and chain is hand engraved, and is a beauty. The crescent and star are set with eight extra quality well cut brilliant white stones that sparkle like diamonds. The locket is suspended from a 22-inch chain, and will hold two pictures. The chain has small links just like high-priced, solid gold chains. The wearer of this locket will certainly feel proud of it.



Barber's Razor Premium No. 4

This splendid and serviceable razor is perfectly tempered, has the finish and workmanship of a strictly high-grade razor. Made of selected steel with hand forged, five-eighth inch polished extra hollow ground black horn handle. You can get a good, clean cutting edge on this razor, and it will prove equally. No pulling or rough edges need bother you if you

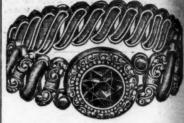
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and is ready for use at any time. The Electric Flashlight is useful around the house, camp, farm, automobile, etc., and in fact, anywhere. Tust think how much easier and safer it is in a dark room to press the button of this Flashlight than to fumble a roun d with matches. Our Flashlight is put up in a neat polished nickel case. It is fitted and lens and throws light as some very automobile, etc., and

ELECTRIC FLASHLIGHT



This is a very stylish bracelet that meet with the approval of the most crit it is adjustable to any size wrist as gold plated throughout in English fin and the fancy engraved links alterna with plain polished ones produce a vipleasing effect. It is ornamented with elaborate, fine cut, sparkling ruby stone, in richly chased border; and is a very be tiful and attractive bracelet. Makes a betiful present.

Sixty

XIX

German Silver Mesh Bag PREMIUM No. 12



This is one of the most Bags on the market today, and exclusive design and German silver. Has a be German silver. Has a beautiful oxi frame, prettilly embossed with an unua handsome floral design. The size of the is 3½x2½, which makes it neither buil too small. Attached to it is a strong si ten-inch chain. Mesh bags are being ried by the most stylish people.

German Silver Vanity Case PREMIUM No. 13



Made of rich German silver, which has a extra finish, and is decorated with fam flower border. Has a mirror of good quity on the inside and powder puff companient and places for quarters, dimes a nickels, also a strong catch that will eards and bills. Spring clasp. Attached this Vanity Case is a ten-inch embossed in chain. Size of case is 3½x2½, which is the size most fashionable women carry.

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